

EXHIBIT B



MILFORD STREET OPERATIONS CENTER STUDY

Utilization of Current Site and Review of Alternative Site/Replacement Cost

Prepared for the City of Charleston, South Carolina

HEERY

Report prepared by:

Heery International, P.C.
Carolinas Area Office
434 Fayetteville Street Mall, Suite 1500
Raleigh, NC 27601

November, 2004
Updated May, 2005

EXHIBIT B

Public Services
Milford Street Operations Center Study

HEERY

TABLE OF CONTENTS

Introduction / Approach

Evaluation

- *Departmental Space Requirements – Milford Street Operations Center*
- *Site Evaluation – Milford Street Operations Center*
- *Facility Assessments*
- *Alternative Site Evaluation – Greenleaf Street Property*

Conclusions

- *Comparative Review*
- *Replacement Costs*
- *Alternative Option and Associated Costs*

Recommendations

Appendix

- A. Bibliography
- B. Site Plans
- C. Photographs
- D. Cost Detail



**Public Services
Milford Street Operations Center Study**

HEERY

Introduction

The City of Charleston requested an independent review of replacement costs for the current Public Service Operations Center at Milford Street. This was requested as due diligence to support a decision to relocate the existing facilities to an alternative site that the City has the opportunity to acquire. The City recognizes the development potential of the existing site and the requisite tax revenue that such a development may provide to support City services to the citizens of Charleston.

Heery International was requested to expedite its review of space requirements and existing facility conditions at the Milford Street Operations Center as part of a larger Government Space Utilization Study commenced in August 2004. The City requested this evaluation be further extended to include land use, operational criteria, and replacement cost of the existing complex. Heery was also requested to survey, research, evaluate, and report on the conditions of the proposed alternative site at Greenleaf Street, located approximately one mile southeast of the Milford Street Operations Center. This document represents the results of the independent comparison of these two sites and will be integrated into the Government Space Utilization Study.

Approach

As part of the Government Space Utilization Study, Heery reviewed the existing physical condition of the Operations Center. This was accomplished through review of existing documentation and a detailed assessment of architectural components (exterior and interior) and engineering systems (mechanical, plumbing, electrical, fire protection, life safety). An evaluation was completed of the site/civil/landscape features of the property.

Also as part of the larger Study, Heery interviewed the department leaders responsible for groups occupying this facility or groups that would/should occupy a replacement facility. This program overview established the functional space requirements, desired adjacencies for work groups, support requirements, and level of public access.

Heery completed an evaluation of the information obtained through the facility condition assessments and the functional group interviews to determine the appropriate size and configuration of a replacement facility. A high-level review of available real estate, land acquisition costs, existing site environmental conditions and possible remediation costs, and other critical site-related factors was completed for both sites. The financial analysis includes an order of magnitude cost estimate for the primary activities of the replacement facility (i.e.: administration, maintenance and repair, warehousing, and other services)

This study included review of land utilization of the Milford Street Operations Center (Parcel # 466-00-00-017 & 466-00-00-046) and an assessment of the alternative Greenleaf Street Property (Parcel # 466-00-00-033). The purpose of the review and assessment of the Milford Street Operations Center is part and parcel to the larger Government Space Utilization Study. The purpose of the review and assessment of the alternative site is to provide a comparison and ascertain the feasibility of relocating the existing operations specifically to the Greenleaf Street site.



Evaluation - Departmental Space Requirements – Milford Street Operations Center**General – Department of Public Service - Operations**

There are several Departments and divisions that occupy this site. Departments utilizing space at this site include Public Services, Fire, Police, Traffic & Transportation, and Parks. Divisions of Public Services utilizing this site include Stormwater, Streets & Sidewalks, Operations (administration), Fleet Management, and Environmental Services (including Trash Collection, Garbage Collection, and Street Sweeping). The Fire Department training facility is on this site as is the Police Department radio maintenance shop. The Parks Department Electrical, Facilities Maintenance, & Construction Division utilize lay-down areas at this site. The Traffic & Transportation Sign Shop is housed in a facility with the radio shop on this site.

The original facilities were developed by the Commission for Public Works (CPW). Following are brief comments relative to field observations and operational space requirements:

1. Environmental issues exist on and near this site. A remediation plan developed by Beazer is being implemented at the adjacent site with plume monitoring on the City's site. This includes monitoring and collection wells. A sweeper transfer drying pad has been designated at the west end of the property for layout of materials collected from storm water inlet cleaning throughout the City.
2. The fueling station provides critical fluids (i.e. brake, oil, etc.) for Environmental Services vehicles to 'top-off' prior to daily departure. There are six abandoned underground storage tanks (UST) adjacent to this facility. The tanks have been filled.
3. Building 1950 originally housed Fleet Maintenance and Environmental Services that were moved to 2150 within the last three years. This portion of the site includes the Police Radio Shop, T&T Sign Shop, vehicle wash station, City Stores, Environmental Services building and vehicle staging.
4. Some storage areas could benefit from material bins and racking of stone and other building materials. There is currently no material handling system utilized by any of the groups on site. Contract parts are maintained for Fleet Maintenance by an outside contractor under the mezzanine area of the garage. Each division has on-site custodians for cleaning facilities and miscellaneous material acquisition (off-site procurement, on-site equipment and materials distribution).
5. The total fleet serviced by this facility is estimated to be 400 vehicles, 40 % of which cycle through or are staged on site at any one time. Total vehicle inventory typically staged on-site each night includes the following by group or use:
 - 29 Streets & Sidewalks vehicles
 - 57 Stormwater vehicles
 - 25 Environmental Services waste collection vehicles
 - 5 street sweepers, 21 scows, 9 claws, 6 general purpose vehicles and 5 motor pool.
6. There is no monitored security on site. The perimeter is fenced and gated access is provided at five locations along Milford Street. Approximately 200 employees access the site daily, however parking is limited. The majority of the employees ride public transportation, carpool, or park outside the property in the I-26 right-of-way parallel with King Street.
7. There is the potential to consolidate storage and office support areas within the existing Public Service Operations facility. There is an underutilized area of approximately 2,600 SF on the second floor of this facility. The mezzanine area adjacent to the garage is also underutilized.



Public Services
Milford Street Operations Center Study

HEERY

8. The site includes several facilities designated to the various Divisions and groups. Four trailers have been installed and are used as follows:
 - Stormwater, Streets & Sidewalks and break room and equipment storage.
 - Stormwater, Streets & Sidewalks offices
 - Environmental Services conference room
 - General break room (used primarily by Fleet Management)
 - A fifth trailer is stored adjacent to the fleet maintenance garage but is not being utilized.
9. The groups using this site, particularly those associated with Public Services, could benefit from centralized file storage/workroom/network printer space.

Division of Environmental Services

This division occupies northeast quadrant of the site adjacent to the I-26 right-of-way (ROW). Following are brief comments relative to field observations and operational space requirements:

1. Division is in the process of replacing old vehicles; need 4 to 5 backup vehicles on hand. Based on the number of collection points, this group will add 2 new vehicles every 2 years.
2. The current replacement plan includes 2 waste collection vehicles, 1 claw, and 3 scows (dump).
3. There is a minimum of eighteen waste collection vehicles on the road each day. Drivers are assigned per vehicle.
4. Responsibilities of this Division include services for commercial businesses on the Peninsula.
5. The group is challenged to daily coordinate City vehicle and employee parking. Waste collection vehicles are parked in rows and head-to-tail on the site and the ROW (under I-26). The parking pattern is set up for one way in and out so that the first vehicle in at night is the first out the next morning.
6. Division is also responsible for individual trash collection carts issued to home owners. Approximately 400, 96 gallon carts are kept in inventory (Environmental Services building). Inventory is replenished about 4 times per year.
7. Grounds custodians (working mostly on the Peninsula) require 40 gallon bins, an inventory of which is stored at Milford Street. This group empties litter baskets and must remove bins from vehicles. There is some consideration being given to go to a second shift with this function (current shift is 7 AM to 3 PM). The grounds custodian bins and trash collection carts inventory is managed separately.
8. Space is needed for miscellaneous supplies such as hand tools, custodial supplies, and rain gear. These materials are currently housed in a trailer on site.
9. The City Stores building (1950 Milford Street) is currently utilized for staged materials from a project on Broad Street. Inventory consists of preserved architectural features, office furniture, and other miscellaneous items. This facility was previously used for warehousing and distribution of office supplies. The City outsourced office supplies leaving this facility available for an alternative use once the current inventory is relocated as part of an on-going project. This facility could accommodate space requirements for Public Services groups.



**Public Services
Milford Street Operations Center Study**

HEERY

Division of Fleet Maintenance

This division of Public Works provides maintenance for approximately 400 vehicles in the City fleet. The facility is primarily set up to accommodate maintenance of large vehicles; however some of the existing fleet must be serviced in the drive due to low clearances within the repair bays of the facility at 2150 Milford Street. Following are brief comments relative to field observations and operational space requirements:

1. Some Parks fleet (some shared responsibilities) is serviced at this facility; however Parks has its own small motor shop.
2. Vehicle fueling is provided by off-site vendors (local stations); six original UST's have been decommissioned (filled); there are three, 1,000 GAL above-ground tanks for emergency use.
3. Fleet Management would like to locate mechanics within one centralized area. In order to do this, the 'cycle-through' time will need to increase to allow the mechanics to complete urgent repairs and still have the ability to perform preventative maintenance. In particular, large equipment preventative maintenance is not getting completed due to the inability to access interior bays.
4. Ideal shop layout should include drop rails for fluid dispensing, unit/strip heaters, diesel exhaust ventilation, and emergency power back-up for tools. None of these provisions are currently in place.
5. Alignment services are provided and could ideally be located in a separate bay. This could be outsourced to local mechanics on an 'as-needed' basis.
6. Body work and painting is outsourced. Quick-lube oil changes, currently dedicated to two crew and bays, could also be outsourced.
7. Vehicle diagnosis is generally performed using hand-held equipment and can therefore be completed on site in lieu of within the garage bays. Bays are often tied up with vehicles waiting on parts. Additional bays are currently required to handle the current work load and will absolutely be required as the size of the fleet increases.
8. Fleet self-performs safety and emissions inspections. Additional requirements are being implemented by SCDOT and NHTSA that will require dedicated bay space in the future.
9. DEHC does not permit outdoor vehicle work.
10. Electric service distribution is at capacity serving the vehicle shop area.
11. Welding area is segregated with adequate space and ventilation.
12. Existing facility actually has lower capacity for vehicle lifts than the original facility (1950 Milford). Currently have 2 large lifts (27 - 30K LBS), and 2 small lifts (10K LBS). The heavy duty lifts do not raise high enough to service the Vectors (storm inlet vacuum vehicles). The existing facility previously housed CPW fleet with less stringent requirements. Fleet would like to add a pit for preventative maintenance services.
13. The completed vehicles are organized in a parking row outside the rear of garage (north). Long-term repairs are kept in row behind.
14. CDL testing is provided to certify City employees (fire, police, and city drivers) at a rate of 1 or 2 per week on a paved portion of the west laydown area. This must be provided by the City due to the high turn-over rate for City drivers and the infrequency of testing by SCDOT/DMV at its local facility.



Public Services
Milford Street Operations Center Study

HEERY

15. A separate fueling facility is provided for oil, engine fluids, and hydraulic fluid top-off for vehicles prior to embarking each day. Emergency fuel is stored in above-ground tanks adequate to support essential fleet vehicles for 2 days. Fuel pumps have generator support. Some routine environmental clean-up is practiced in this area.
16. The wash area and wash rack are critical to controlling corrosion on the fleet. The size of these units limits the frequency of use by the entire fleet. Wash station is an open type with rinse drainage to sanitary sewer. The unit is scheduled to avoid use of overtime.
17. There may be some advantage to consolidating fleet maintenance services provided by Public Services with Police, Parks, Charleston County, and possibly other private enterprises.

Fleet maintenance services similar to those provided at Milford Street are separately provided by the City Police, Fire, and Parks for their vehicles. There is also a new County fleet maintenance facility in the vicinity that services County vehicles. Consideration should be given to an alternative to multiple similar facilities either through an inter-local agreement with other related agencies or through a structured outsourcing arrangement with private service stations.

Division of Stormwater, Streets and Sidewalks

1. This group anticipates additional storm system collection basin cleaning will be added in suburban areas that the City will be required to repair and clean. The addition of roads, driveways, sidewalks, drainage ditches and stormwater systems through annexation of property and new development has grown faster in the last 10 years than in previous years. Aging systems require more frequent repair. These repairs put additional burden on the department which may require additional field positions. Field positions do not typically require office space, but may require additional equipment to perform their tasks that would be staged and serviced at Milford Street.
2. Stormwater currently cleans the downtown catch basins and piping once per year, but they are working to increase this preventative maintenance to twice per year. A preventative maintenance cleaning schedule is also being planned for West Ashley, James Island and Johns Islands. The materials taken from the catch basins are spread on a drying bed located at the western edge of the laydown yard. This is required to dry out storm inlet debris collected by the Jet-Vac Vactor vacuum vehicles. The run-off from this area is to be managed per a plan developed by Earth Tech (dated January 2004). Some of the elements for this containment have been completed. The frequency of use is typically 2 trucks per day.
3. There is limited vehicle staged away from Milford Street as this has not been successful in the past.
4. There is a desire to establish operations to provide more preventative maintenance; less reactive.
5. Storm water management equipment and materials must be segregated to meet Storm Water District audit requirements.
6. Construction materials are stored on-site. There is currently no material management or material distribution system for any materials stored on site. Small equipment and materials are stored for storm water system repairs including concrete, iron, and bricks.
7. The Streets and Sidewalks Division is forecasting a major repair project for the brick and cobblestone streets in the historic district of the Peninsula. These streets require labor intensive repair to maintain their historic accuracy. A large percentage of streets still require the installation of handicap ramps for accessibility. An increase in equipment storage is projected.



Public Services
Milford Street Operations Center Study

HEERY

Department of Police

The Police Radio Shop shares the facility at 1950 Milford Street with the Traffic and Transportation Sign Shop and Public Service Streets and Sidewalks department. The shop has an open bay that allows vehicles to drive onto a vehicle lift. Proper ventilation is required for vehicles running inside the building during repair. Shop staff utilize an electrical work bench for smaller equipment repair. Secure storage is required for radio equipment and vehicles. The communications mobile back-up is also at this location.

Department of Fire

Milford Street operations include space for classroom training, a burn pit, confined space building with tunnels, a fire hose practice area and a five-story tower used for firefighting drills and exercises. Office space is provided at this site for the training officer who conducts the daily training exercises.

Department of Parks

Citywide storage for tarpaper, plywood, obsolete equipment, furniture, building components are located here. Some of this storage has historical significance and must be maintained.

Department of Traffic & Transportation

The Sign Shop personnel and field crews currently share the same space. A separate room for staff to utilize outside the shop area would relieve crowding. Storage space is limited and aluminum materials need to be secured in order to reduce theft. Chemicals are currently stored in the shop area with the personnel, but for safety reasons they should be stored separately.

The T&T Signal Shop is currently located in leased space at 656 King Street. The lease is set to expire within the next two years. Ideally, this function should be relocated to the Operations Center and consolidated with other T&T functions at this site.



**Public Services
Milford Street Operations Center Study**

HEERY

Site Evaluation – Milford Street Operations Center

Heery architectural/engineering assessment team visited the site between August 30, 2004 and September 1, 2004. During this time City of Charleston employees were interviewed, site plans and other data were provided by the City, the facilities were observed, and information concerning the site was collected from various City and Charleston County offices.

The existing site will require remediation if the City considers relocating and selling the property. This type of activity can be negotiated between seller and purchaser, but is usually the responsibility of the seller. Based upon the initial environmental assessment of the site as detailed below, any remediation will require the necessary steps to assure regulatory agencies that the site pose no danger to occupant health and the environment. This process may require a significant amount of time lending concern to the idea of redevelopment of the site to an alternative use in the short term.

Parcel Information

The following information was obtained from GIS maps provided by the Charleston County, Property Information System, dated 31 AUG 04, and other sources. This complex is made up of two separate parcels:

Parcel No.:	466-00-00-017
Zoning	HI, City of Charleston, SC
Acreage:	4.14
Property Address:	1950 Milford Street 2166 Milford Street

Parcel No.:	466-00-00-046
Zoning:	HI, City of Charleston, SC
Acreage:	12.23
Property Address:	2150 Milford Street

The City of Charleston is using approximately 1.83 acres of US Interstate 26 (I-26) right-of-way property that is located beneath the elevated highway. With the I-26 right-of-way included, the total property being utilized by the current operations is 18.20 acres.

The site is 16.37 acres, located within the City of Charleston, South Carolina. This section of the city has been an industrial area for many years. Petroleum, chemical, and manufacturing companies have been located and still maintain operations in the vicinity of this site. Public Service Operations have operated on this site for approximately 35 years.

Site Utilization

The Department of Public Service is the primary user of the site. Fire Department training is also being conducted at this location. Permanent and manufactured buildings with approximately 48,500 gsf (1.11 acres) are being used for offices, shops, storage, classrooms, and training. Currently the entire complex is fully utilized. Facilities are provided to support close adjacencies to Public Services by several other groups in addition to the Fire Department, including the Police Department (Radio Shop), Traffic and Transportation (T&T Sign Shop), and Parks. There is a desire to increase available space for T&T and possibly Parks.



Public Services
Milford Street Operations Center Study

HEERY

Access to the site is north off Milford Street just west of the intersection with King Street. Site access is maintained through five, two lane, gated entrances. Entrance driveways, areas around the buildings, some parking areas, and the CDL Training Course are paved with asphalt covering approximately 5.59 acres of the site. Unpaved driveways cover approximately 3.63 acres of the site. Gravel, compacted soil, and other materials from the lay down, staging, and storage operations creates approximately 5.10 acres of semi-impervious work surface.

The 1950 Milford Street property (Parcel No.: 466-00-00-017) includes the following facilities:

Building #1;	Storage - Environmental Services
Building #2;	Storage - City Stores
Building #3;	Oil and break fluid fill area and emergency fuel storage tanks – Department of Public Service
Building #4-A:	Sign and maintenance shop – Department of Traffic & Transportation
Building #4-B:	Radio maintenance and repair shop – Police Department
Vehicle Wash:	Used for cleaning vehicles and equipment - Public Service Operations
Parking:	Area for parking and staging - Environmental Services and other Public Service vehicles and employee parking

The 2150 Milford Street property (Parcel No.: 466-00-00-046) includes the following facilities:

Trailers 5, 6 & 7:	Training, offices, and assembly area – Department of Public Service
Building #8-A:	Offices for administration activities – Department of Public Service
Building #8-B:	Garage for maintenance and repair- Fleet Management
Parking Area:	Space used to receive, repair and disperse vehicles being maintained, - Fleet Management
Staging:	Display area for surplus vehicles and equipment to be auctioned – All City Departments
Building #9:	Customer service facility - Fleet Management
Building #10:	Storage area – Department of Parks
Lay-down Areas:	Material and equipment storage – Parks
Lay-down Areas:	Material and equipment storage – Stormwater, Streets and Sidewalks
Drying Pad:	Jet-Vac and Street Sweeper debris/sludge - Stormwater, Streets and Sidewalks
Container/Units:	Metal units housing hazardous & flammable material storage – T&T Paint Shop
CDL Testing:	Driving course for employee training & SCDOT/DMV testing – Fleet Management

The 2166 Milford Street property (also Parcel No.: 466-00-00-017) includes the following facilities:

Building #11:	Fire training tower – Fire Department
Building #12:	Fire training classroom - Fire Department
Burn Pit:	Fire suppression training – Fire Department
Building #13:	Units and tunnels constructed for confined space training – Fire Department
Practice Area:	Space provided for fire hose training – Fire Department
Parking:	Fire Department trainees

I-26 Right-Of-Way property under elevated roadway includes the area used for material dry storage, parking and staging, and is used for overflow employee parking.



Public Services
Milford Street Operations Center Study

HEERY

Current Site Utilization Summary

User Groups	Site Size (LF)		Bldg. Area SF (est.)	Site Area (1)		Total Area	
	W	L		SF	ACRES	ACRES	Comments
I-26 ROW (2)	385	208		79,888	1.83		
						1.83	
City Stores	170	155	18,000	26,350	0.60		
						0.60	
Auction Storage	245	50		12,250	0.28		
	70	350		24,500	0.56		
	175	290		50,750	1.17		
						2.01	
Radio Shop	70	180	Incl. below	12,600	0.29		
						0.29	
Paint Shop	100	180	4,000	18,000	0.41		
						0.41	
Environmental Services	55	255		14,025	0.32		
	360	110		39,600	0.91		
	120	200	45,625	24,000	0.55		
	45	85		3,825	0.09		
						1.87	T&T Sanitation Parts, Welding, S&S Trailers
Public Services Administration	210	200		42,000	0.96		
	70	90	10,400	6,300	0.14		
						1.11	
Parks & Recreation	65	25		1,625	0.04		
	160	75		12,000	0.28		
						0.31	
Fleet Maintenance	170	205		34,850	0.80		
	75	285	18,950	21,375	0.49		
						1.29	Garage Fueling
Stormwater	60	240		14,400	0.33		
						0.33	
Fire Dept	240	180	1,000	43,200	0.99		
						0.99	Training
Sweeper Transfer Drying	390	130		50,700	1.16		
						1.16	
CDL Testing Area (3)	295	195		57,525	1.32		
						1.32	

Subtotal Defined User Space	97,975	13.54
Total Area (parcel)		18.20
Defined User Space		13.54
Combined PSO - Parking, Laydown & Storage		4.66
Total Area		18.20

Footnotes:

- (1) These areas include buildings, impervious surface, greenspace, stormwater channels, etc.
- (2) R of W = Right-of-Way
- (3) CDL = Commercial Drivers License



**Public Services
Milford Street Operations Center Study**

HEERY

Facility Assessments

Heery reviewed the existing physical condition of the Milford Street Operations Center. This was accomplished through review of existing documentation and a detailed assessment of architectural components (exterior and interior) and engineering systems (mechanical, plumbing, electrical, fire protection, life safety). The site surveys included Site/Civil/Landscape, Building Envelope, Interior Finishes, and Building Systems. Overall findings for the site and each facility are included in this document. The associated corrective action and order-of-magnitude costs for these items are included with the balance of the Facility Assessments within Appendix 2 of the Government Space Utilization Study (facilities master plan).

Site/Civil/Landscape Conditions:

An evaluation was completed of the site/civil/landscape features of the property. The following general site observations were made during the field survey and resulting evaluation:

1. Stormwater drainage channels and other wet areas cover approximately 0.28 acres of the site. A ponding area of approximately 0.16 acres, in the southwest corner of the campus is designated as 'water' on the City GIS maps and may be classified as a wetland.
2. The site is generally flat and has been graded to surface-drain storm water by sheet-flow, open channel and a limited amount of underground piped systems into the City storm water collection system. The site elevation varies between a low of 11.5 and a high of 16.2 feet above mean sea level. FEMA map Panel # 4554120015D indicates the complex is in Flood Zones B and C.
3. Utility service water, gas and sewer lines are located in the general vicinity of the site.
4. Railroad tracks that do not appear to be used enter the complex from the north, travel through the center of the complex and terminate just short of the west property line.
5. A large part of the complex is used for vehicle parking, equipment parking and storage, supplies/material storage and storage of City vehicles and equipment scheduled for auction or disposal.
6. Parcel No. 466-00-00017 has a vehicle wash station located in the center of the property. A small area, adjacent to the vehicle wash station is used to store an emergency fuel supply and provide vehicles with a supply of motor oil and other vehicle fluids to daily top-off systems.
7. Approximately 4,000 LF of six foot high chain-link security fence has been used to enclose the perimeter and provide cross section separation of the site.
8. Site lighting is provided using high pole area lights located throughout the complex.
9. A 2,100 SF storage bin with a four foot high concrete retaining wall is used to store storm water materials and supplies.
10. A Commercial Drivers License (CDL) Course is located on approximately 1.32 acres of the asphalt parking area at the west end of the complex. SCDOT has approved the layout of the course and it is used for employee CDL training and testing as needed.
11. It appears that pollutants are being transported from the site by storm water runoff. The Storm Water Pollution Prevention Plan, prepared by Earth Tech, dated January 1999 has not been implemented.



Public Services
Milford Street Operations Center Study

HEERY

12. Employee parking at the site is limited; therefore many park directly off-site in the I-26 overpass easement or in the set-back along King and Milford Streets.
13. The designated garbage truck parking area appears to be too small. Some trucks are being parked on the I-26 Right-of-way.
14. The wash station is inadequate for garbage trucks and other large vehicles, and does not appear to be properly contained. Uncontrolled run-off appears to occur during some wash operations and heavy rainfall events. The number and/or type of wash areas do not appear to be adequate for the number of Public Service vehicles and equipment.
15. The space designated for Public Service vehicle parking appears to be inadequate for current and future needs as the site is now being utilized.
16. Fleet Management is using outdoor asphalt parking areas to service and repair vehicles due to a lack of indoor shop space and low clearance at entry doors.
17. Surface condition of the driveways and parking areas is generally in fair to poor condition.
18. Site contamination has occurred at some time in the past probably as a result of an underground plume from an adjacent former Koppers Company property. A 100% NAPL/Groundwater Remedial Design for the Former Koppers Company, Inc. site (dated 11 APR 03) was prepared by Key Environmental Incorporated. SWBZ NAPL recovery wells were planned in this report and have since been located on the east end of the complex (see Photographs in Appendix C).
19. The fill area for vehicle oil and hydraulic fluids does not appear to be properly contained. It appears that soil contamination may still be occurring at this location. Other areas around the site appear to have been contaminated by the use of petroleum products in the past.
20. The Fleet Maintenance Garage outside work areas appear to be in fair condition, and well maintained. The space designated to these activities appears to be too small for the number of vehicles being staged and maintained.
21. Some of the material storage lay down areas appear to be inefficiently organized and use more area than may be required.
22. Area used for debris/sludge drying appears to be too small for the volume of debris being collected. A plan that has been developed for a better contained and more efficient drying area has not been constructed. Storm water from this area is not being well contained (area was under construction at the time of the field survey).
23. Fire Department employees reported that the Fire Training Tower area is adequate for its function. Control of smoke released during training has been a problem in the past to the point of affecting traffic flow on nearby I-26.
24. The exterior of the Confined Spaces Training area appears to be in good condition.
25. The Fire Pit Training area does not appear to have adequate containment of run-off containing oil and other potential contaminants.
26. Paint is being dumped or spilled onto the asphalt near the Paint Shop.
27. Paint and other flammable material are being stored in inadequate conditions on the site.
28. The site chain-link fence and gates are in fair to poor condition.



Public Services
Milford Street Operations Center Study

HEERY

29. The complex does not meet the current NPDES requirements for the elimination of the release of pollutants from the site.
30. Handicap parking, accessible routes, building access, and other parts of the site do not meet the current ADA requirements.

Building Conditions 1950 Milford

An evaluation was completed of the architectural and engineering features of the building on this property. The following general site observations were made during the field survey and resulting evaluation:

1. All buildings are pre-engineered steel structures with metal siding and roofs.
2. The City Stores building is one of the oldest and is in the poorest condition. The roof has significant leaks. The interior is in poor condition. There are three small areas cooled by thru-wall cooling units. Most of the building has vent fans, and no cooling. The building is heated by electric unit heaters, and by one radiant heater.
3. Environmental Services Storage building is one of the oldest and is in poorest condition. The roof has significant leaks and the interior spaces are in poor condition. The building is cooled by split system heat pump units with electric heating coils.
4. The T&T/Radio Building (Building No. 4) appears to be the newest of the buildings on this parcel and is in fair condition. The spaces appear to be too small for the functions contained within.
5. The garbage truck wash is inadequate, and does not appear to be properly contained. A cover would prevent uncontrolled run-off in rains. The number of wash racks appears to be inadequate for the number of trucks.
6. The garbage truck parking is too small. There is inadequate parking for employees.
7. There are two SCE&G electrical services to this property. Pad mounted transformers and meters are located at the City Stores building, and the T&T/Radio Shop building. Both services are 3 phase 120/208 volts, serving 1000 ampere service switchboards.
8. The switchboard in the City Stores building serves panel boards within this building, the adjacent Environmental Services building, the Fueling Station, and the wash rack. Equipment is approximately 25-30 years old, in fair condition. Under normal circumstances, this equipment could remain in service another 10 years, but due to the poor general condition of the building; it should be replaced within five years.
9. The T&T/Radio Building switchboard and panel boards are approximately 25-30 years old, in good condition. This equipment can be expected to remain in service for 10 years.
10. Interior lighting in the City Stores and T&T/Radio Shop buildings appears to be in good condition; however the lighting in the Environmental Services building is in fair to poor condition.
11. Site lighting consists primarily of building mounted HID floodlights, in good condition.
12. Telephone service to all buildings is from Bellsouth, consisting of copper 4 pair cables from service entrances in the City Stores and T&T/Radio Shop buildings to the outlets. Category 5 data cabling and racks have been added for data service to office areas.



Public Services
Milford Street Operations Center Study

HEERY

13. Each building on this site has a security system consisting of motion detectors and/or window & door sensors. The City Stores and Environmental Services buildings have Sonitrol Systems, and the T&T/Radio Shop building has an ADT system. There is no security system for the exterior areas of the property.
14. There are no fire alarm systems in any of the buildings on this property.

Building Conditions 2150 Milford

The following general site observations were made during the field survey and resulting evaluation:

1. All buildings are pre-engineered steel structures or trailers with metal siding and roofs.
2. The three trailers are in poor condition. The Bard HVAC systems appear to be near the end of their design life.
3. The Public Service administration office areas are in fair condition, but appear to have some code deficiencies.
4. The Fleet Management maintenance garage appears to be in fair condition, and well maintained. This area is too small for the number of vehicles being staged and maintained.
5. Some of the storage lay down areas appear to be inefficiently organized and to use more area than is required.
6. The building has a dedicated SCE&G service consisting of a pad mounted transformer and meter serving a 3 phase, 120/208 volt, 1200 ampere switchboard.
7. The three trailers each have a dedicated SCE&G pole mounted transformer and meter, serving single phase, 100 ampere panel boards. Telephone and data service is also provided to the trailer used for office functions. All electrical equipment and devices appear to be in good condition.
8. The building switchboard serves panel boards throughout this building. Equipment is approximately 25-30 years old, in good condition. This equipment can be expected to be in service another 10 years.
9. The T&T/Radio Building switchboard and panel boards are approximately 25-30 years old, in good condition. This equipment can be expected to be in service another 10 years.
10. Interior lighting in the building and trailers appears to be in good condition.
11. Site lighting consists of multiple types of HID lighting; floodlights are building mounted and powered from the facility. For the extended site lay down areas, SCE&G owned pole mounted lighting is provided.
12. Telephone service to all buildings is from Bellsouth, consisting of older copper 4 pair cables from service entrances in the building to the outlets. Category 5 data cabling and racks have been added for data service to office areas.
13. There are no interior or exterior security systems for this building and site.
14. The building does have a fire alarm system, however pull station mounting heights and notification devices (audio only, no strobes) do not meet current code requirements.



**Public Services
Milford Street Operations Center Study**

HEERY

Building Conditions 2166 Milford

The following general site observations were made during the field survey and resulting evaluation:

1. The fire training tower appears to be in good condition and adequate for its function.
2. The fire training conference room appears to be in good condition.
3. The exterior of the confined spaces training area appears to be in good condition.
4. The fire pit training areas does not appear to have oil and gas run-off adequately contained.
5. The fire training conference room has a dedicated SCE&G pole mounted service transformer and meter, serving a single phase, 100 ampere, 120/240 volt panel board. All electrical devices and lighting appears to be in good condition. There is no telephone, data, security or any other systems in the building.
6. The Fire Tower has no electrical systems service of any kind to the building.



Public Services
Milford Street Operations Center Study

HEERY

Alternative Site Evaluation – Greenleaf Street Property

Heery's architectural/engineering assessment team visited the site between August 30, 2004 and September 1, 2004 concurrent with the assessment of the existing Milford Street Operations Center. Site plans and other data were provided by the City or researched and collected following the site assessment. Photographs were taken of the site and adjacent facilities (see Appendix C). Information concerning the site was collected from various City and Charleston County offices.

Parcel Information:

The following information was obtained from GIS maps provided by the Charleston County, Property Information System, Dated 31 AUG 04 and other sources.

This is a single parcel site:

Parcel No.:	466-00-00-033
Zoning	HI, City of Charleston, SC
Acreage:	11.75
Property Address:	(Meeting Street)

The property location is listed as Greenleaf Street. It is located on Meeting Street (Federal Highway 52) between Greenleaf Street and Algonquin Road. The following was noted at the site:

1. Modifications to the size and/or configuration of the proposed property may be underway. At this time the City of Charleston has not provided the limits and size of modifications to the proposed property, which may be different from the parcel information listed above.
2. Phase I Environmental Site Assessments identified this parcel as two separate properties: Greenleaf Street Property (10.5 acres) and Greenleaf Street II Property (1.0 acre).

Description of Site:

The site is 11.75 acres located within the City of Charleston, South Carolina. This section of the City has been an industrial area for many years. Petroleum, chemical, and manufacturing companies have been located and still maintain operations in this area.

1. According to County Real Property Record T.M. 464-00-00-033, this property has been owned by Humble Oil Refining Co., Exxon Corporation, and Allied Terminals, Inc. Allied Terminals, Inc currently has operations on the property east and northeast of the site.
2. The property is adjacent to three streets: Greenleaf Street, Meeting Street and Algonquin Road.
3. A designated property access has not been established. Entrance to the property is unrestricted from Meeting Street and Algonquin Road.
4. The property is an open site with an abandoned fuel pumping station in the northeast corner with 125 LF of decommissioned, above-ground steam piping. The surface of the site has been cleared of previously used above-ground bulk petroleum storage tanks and support facilities (southwest corner of site). A small concrete tank support and a concrete pad/foundation remain at this location.



Public Services
Milford Street Operations Center Study

HEERY

5. Site work on the adjacent property to the north of the site, appears to have demolition debris buried beneath the surface. This would indicate that similar conditions may be prevalent on the proposed site. Soil test borings and open pit exploration will be required to determine the type and extent of the materials that may be located beneath the surface.
6. The site has been graded, grassed and is being maintained as a natural grass field.
7. Storm water drainage channels that drain to the northeast side of the site are located in the center of the property. The drain channels and an associated wet area at the head of the channels may be considered part of a jurisdictional wetland. The ditch and collection area cover approximately 0.25 acres. Large areas of standing water were observed in the center of the property. The areas with standing water cover approximately 2.20 acres. These areas are located between contour lines 10.0 and 12.0.
8. The entire site drains to a low area of approximately 1.03 acres that has an elevation of 6.8 FT above mean sea level. There is no apparent outlet from this storm water collection depression, therefore it may be considered a jurisdictional wetland. A total of more than 3.48 acres may be delineated as jurisdictional wetlands requiring protection or mitigation. Off-site storm water appears to be draining into the depression from the adjacent property, located to the east of the site.
9. The site has a gradual slope from Meeting Street (Elevation 14.3) toward the depression (Elevation 6.8) in the northeast corner of the site. The site elevation varies between 13.1 and 6.8.
10. FEMA maps indicate the site is in Flood Zones A7 and Zone B. Flood Zone A7 is within the 100-year flood zone and covers much of the center of the site. The base flood elevation in the A-7 Zone is shown as EL 13.
11. It is anticipated that connections to utility service supply lines will be possible at one of the three streets adjacent to the site.
12. Monitoring well markers are located on the site. This indicates the presence of contamination of groundwater under the site.

Site Utilization:

There is no apparent utilization of the property at this time.

General Site Conditions:

Following are relevant site observations based upon visual inspection, photographic study, research and evaluation of the land uses and previous ownership, and application of current environmental and building codes applicable to this area within the City of Charleston.

1. The observed areas will require wetlands delineation to determine the exact impact on site utilization and/or mitigation requirements. Any proposed impacts to jurisdictional resources will require application for necessary permits from both state and Federal agencies. Mitigation for any proposed impacts will also be required by these agencies.
2. The City requires the on-site detention/retention of storm water run-off when a site is developed in this part of the City. The City's "Storm Water Management System Criteria" requires that storm water runoff not exceed the pre-development conditions for a ten-year storm frequency event.



Public Services
Milford Street Operations Center Study

HEERY

3. Existence of wetlands and storm water detention pond requirements may reduce the usable site area to less than 9.0 acres.
4. Portions of the site will require methods to raise the finished floor elevations of new construction above elevation 13 FT, the 100-year flood zone that is identified on the City GIS map and the Flood Hazard Boundary Map.
5. The site is well grassed. Trees and undergrowth are heavy in and around the depression located in the northeast corner of the site.
6. Telephone line pads, boxes and equipment are located at the southwest corner of the property. This appears to be associated with the telephone service lines along Meeting Street.
7. Commissioners of Public Works (CPW) reported that water is available to the site. Connection to sewerage will require a lift station and a line being "jack and bored" under Meeting Street. SCE&G reported that gas service is available in the area.
8. The extent of demolition debris existing under the surface of the soil could not be determined during this site assessment.
9. A Phase I Environmental Site Assessment was previously conducted (as reviewed by Heery) to identify Recognized Environmental Conditions (REC) at this site by General Engineering & Environmental, LLC. The report states:
 - i. *"On September 23, 1997 Allied and Exxon entered into a Voluntary Agreement with the United States Environmental Protection Agency pursuant to federal Resource, Conservation and Recovery Act authority. Under the agreement, Allied and Exxon agreed to assess potential areas of concerns (AOCs) and conduct corrective action (as required) at the bulk storage facility. The one-acre subject site, as well as the 10.5-acre parcel which Ashley II bought this spring, were considered a potential AOC by EPA and were identified as the "West Field" in the Voluntary Agreement. However, no further assessment has been conducted on the subject site by Exxon."*
 - ii. *"The REC are believed to be the responsibility of Exxon pursuant to their agreements with Allied and with the regulatory authorities."*
10. A 6 foot chain-link fence is located along the east boundary of the site and is believed to be on the adjacent property.
11. Development of the site will require compliance with the current NPDES requirements for the containment and elimination of the release of pollutants from the site. This may require clean-water and sediment collection ponds. Separation of oil and water in storm water discharge may also be required.



Public Services
Milford Street Operations Center Study

HEERY

Conclusions

These conclusions are based on the Milford Street Public Service Operations Center site assessment, the Greenleaf Street Property site assessment, the current site utilization at Milford Street, and the comparative study of operations at Milford Street and conditions at the Greenleaf Street property.

1. The proposed Greenleaf Street property (11.75 acres) is approximately 65 % of the size of the property being utilized (18.20 acres) at Milford Street for Public Service Operations and other City functions.
2. Usable land at the Greenleaf Street site could be reduced to less than nine (9) acres after wetlands are delineated and an area for storm water retention ponds has been allocated. This would only allow utilization of an area that is less than 50% the area currently being utilized at the Milford Street Public Service Operations Center.
3. Any proposed impacts to jurisdictional wetlands at the site will require appropriate state and Federal permits. Mitigation of impacts will require additional expense and time.
4. A considerable area of the Greenleaf Street property is located in the A7 Flood Zone. This will require that finished floor elevations are established at or above elevation 13.0 FT above mean sea level in the flood zone area of the site. All construction below this elevation must use FEMA approved materials.
5. The full extent of contamination, remedial requirements and the impact this situation may have on site development is not fully understood at this time. Reference the Phase I - Environmental Site Assessment for the Greenleaf Street Property, Charleston, South Carolina,, Charleston County TMS No. 469-00-00-033, Section 1.0 Summary of Report as prepared by General Engineering & Environmental, LLC, dated 30 APR 04.
6. In any situation, both Milford Street and the proposed Greenleaf site will require environmental remediation some of which could require several years to remedy the properties for the intended use. Ultimately, the determination will have to be made that the proposed Greenleaf site poses no danger to health and environment prior to site development.
7. The entire 18.20 acres of the Milford Street Operations site is currently being utilized by the Public Service Operations and other City departments.



Public Services
Milford Street Operations Center Study

HEERY

Comparative Review – Milford Street OPS Center and Proposed Greenleaf Street Property

	Study Date 09/29/04	MILFORD STREET PUBLIC SERVICE OPERATIONS COMPLEX		GREENLEAF STREET PROPERTY	
Zoning		HI - City of Charleston		HI - City of Charleston	
Parcel Number					
			Acres		Acres
	466-00-00-046	Milford PSO Street	12.23		
	466-00-00-017	Milford PSO Street	4.14		
	466-00-00-033			Greenleaf Street Property (includes Greenleaf St. Property & Greenleaf St. II Property)	11.75
	Other Property	I-26 Right-of-way under elevated roadway	1.83		
	Total Area		18.20		11.75
Site Elevations					
	High		16.2		13.1
	Low		11.5		6.8
Flood Zone		Yes - Most of property is in Zone C (Areas of minimal flooding). The balance is Zone B (the area between limits of 100-year flood and 500-year flood with average depths less than 1 foot)	B & C	Yes - Flood Zone A7 (Elevation 13) covers a large portion of the site (Areas of 100-year flood). The balance is Zone B (the area between limits of 100-year flood and 500-year flood with average depths less than 1 foot)	A7 & B
Existing Site Conditions					
			Acres		Acres
	Building (gsf)	Constructed and Manufactured	1.11	Abandoned fuel pumping station (less the 1,400 sf)	0.00
	Drives and Parking	Paved	5.59		0.00
	Drives and Parking	Un-Paved	3.63		0.00
	Laydown & Storage	Compacted Soil	5.10		0.00
	Greenspace	Turf and Landscaped Areas	0.50	Entire site is currently a grassed field with an area of trees and undergrowth in the northeast corner	
	Utilization of Other property	I-26 Right-of-way	1.83		0.00
Property Utilized			17.76		0.00
	Area of Ponding	Drain from Sludge Drying Pad	0.16	Areas in the center and to the east side of property	2.20
	Ditches and Wetlands		0.28		1.28
Property With Restricted Use		Wetlands and Stormwater Management	0.44	Wetlands and stormwater drainage channels	3.48
Approximate Useable Area Without Mitigation			17.76		8.27
	Total Site/Area		18.20		11.75



Public Services
Milford Street Operations Center Study

HEERY

	Study Date 09/29/04	MILFORD STREET PUBLIC SERVICE OPERATIONS COMPLEX		GREENLEAF STREET PROPERTY	
Current Utilization Site Area Requirements					
		Public Services Operation and Fire Department Training	Acres Required	Vacant	Acres Required
	Public Service Operations	Administration Offices	1.11		11.86
		Environmental Services	1.87		
		Parking, Laydown & Storage	4.40		
		I-26 Storage	1.83		
		Stormwater	0.33		
		Sludge Drying	1.00		
		CDL Testing Area	1.32		
	Public Service Fleet	Fleet Maintenance Shop	1.29		1.29
	Parks and Recreation	Laydown and Storage	0.31		0.31
	Traffic and Transportation	Sign Shop	0.41		0.41
	Fire Department	Training Area	0.99		0.99
	General City	Radio Shop	0.29		2.90
		City Stores	0.60		
		Auction Storage	2.01		
Total Area Utilized/Required			17.76		17.76
	Restricted use Area		0.44		3.48
Area Available			17.76		8.27
	Total Site/Area		18.20		11.75
Other Site Considerations					
	Contaminated Site	Underground Water Recovery Wells located on east end of property		Underground Water Monitoring Wells are located on the property.	
	Contaminated Site	Suspected areas of <i>Recognized Environmental Conditions</i> exist on this site		On site <i>Recognized Environmental Conditions</i> have been identified.	
	Retention/Detention Ponds Required	No, but may be required with renovation and/or new construction		Yes - Compliance will be required	
	National Pollutant Discharge System (NPDES) Required	No, but will be required with renovation and/or new construction		Yes - Compliance will be required	
	Fenced	Yes - 6 ft security chain-link fence and gates are in fair to poor condition		No	
	Public exposure that may require buffers or screening of operations	Low- Location not exposed to heavy traffic or residential area		High- Location exposed to heavy traffic and small businesses	



Public Services
Milford Street Operations Center Study

HEERY

Replacement Cost Review

An estimate was developed using two primary replacement scenarios:

- Relocation of existing site activities to a new site with some existing facilities and some new construction (buildings and sitework, i.e. former car dealership or commercial/industrial site).
- Relocation of functions considering growth requirements and functional adjacencies at a new site, either a Greenfield site or redeveloped site without facilities and infrastructure.

The overall space requirements are based upon program information derived from interviews with the City and detailed assessments of the existing site at Milford Street and the proposed redeveloped site at Greenleaf Street. This analysis considers the City's opportunity to consolidate the functions of Public Service Operations to one, public works location.

Functional Group	Current Area	Current Requirements		Proposed through 2015		Notes	Type of Space (GSF)		
		USF	Est. GSF	USF	Est. GSF		Office	Maint.	Whse.
Public Services Operations	92,975	78,917	86,809	82,063	90,269		8,700	51,042	30,527
Administration	28,400	26,439	29,083	26,601	29,261	1	1,920	9,700	17,640
Fleet Management	18,950	15,966	17,563	18,823	20,705	1	865	19,842	0
Environmental Services	45,625	31,879	35,067	31,846	35,031	1	3,600	21,500	9,930
Streets & Sidewalks	In Admin.	3,961	4,357	3,961	4,357	1	1,400		2,957
Stormwater	In. Env. Services	672	739	832	915	1	915		0
Parks - Construction		3,867	4,254	3,867	4,254		260		3,994
Fire Department - Training	1,000	909	1,000	0	0		0		0
Police Department - Radio Shop	In Sign Shop	3,960	4,356	3,960	4,356		0	4,356	0
Traffic & Transportation		4,921	5,413	21,585	23,744		3,240	13,243	7,260
Sign Shop	4,000	4,921	5,413	11,521	12,673	2	840	4,573	7,260
Signal Shop		0	0	8,414	9,255		1,630	7,625	
Parking Meters		0	0	1,650	1,815		770	1,045	
Subtotal	97,975	92,574	101,831	111,475	122,622		12,200	68,641	41,781
Exterior Site Functions			Acres		Acres				
Laydown Areas			4.66		5.00		Exterior warehouse, Site		
Sign Shop/Support			0.70		1.00		Exterior warehouse, Site		
Fueling Station			0.49		0.50		Site		
Equipment Storage			9.11		8.80		Site		
Wash Area			0.91		1.50		Site		
Material Storage			Above				Exterior warehouse, Site		
Subtotal			15.87		16.80				
Total with Buildings			18.20		19.60				
NOTES:									
1 Proposed Administration includes consolidation of office requirements with shared support for all groups.									
2 Current requirement for Sign Shop exceeds available SF shared with Radio Shop.									
Space Types									
Office			8,900		12,200				
Maintenance			52,325		68,641				
Interior Warehouse			36,750		41,781				
Exterior Warehouse			20,000		20,000		Does not exist on current site		
Site (Acres)			18		20				
Subtotal			117,975		142,622				

The minimum required to relocate the existing operations to a new site with existing facilities is approximately 117,975 (say 118K) GSF on 18 acres. The minimum required to relocate to a new site that can accommodate growth through 2015 is approximately 142,622 (say 143K) GSF on 20 acres.

The requirements are categorized into "Space Types" based upon the known variance in construction costs for building facilities to support these general functions (see Appendix D for estimated costs). This provides the range of replacement cost to contemplate relocation of the functions at the existing facility and those required through 2015 to either of the alternative site locations within the City of Charleston.



Public Services
Milford Street Operations Center Study

HEERY

Cost estimates are included in Appendix D and were developed using the following general assumptions:

1. Site Development (including special use spaces i.e. car wash, filling station, etc.)
2. Existing facility costs will include Phase 1 Environmental Assessment (est. \$4,000). This may result in the need for a UST environmental investigation and removal of USTs. We need to include a cost for removal of six existing 10K gallon units, and minimal site remediation.
3. Office areas include open plan with conference rooms, a small data center (5,000 SF), plan room (with archive storage), break rooms, central workroom, and a training center (5,000 SF).
4. Maintenance spaces include shop areas for Building Maintenance trades (mechanical, plumbing, electrical, locksmith), Signage, and Fleet repair/maintenance. Except for fixed items (lifts, generators, etc.), the cost model assume the City will move shop equipment to the new location. The Sign Shop has special ventilation and humidity control requirements.
5. The fleet repair/maintenance area will include 20, 2-pole lifts; 15 @ 9K Lbs capacity and 5 @ 30K Lbs capacity.
6. Warehouse spaces are all conditioned and require some partitioning and separate access for chemical storage, and other materials storage. Exterior warehouse space should be generally open with one partially enclosed bay (3 – sides closed).
7. New site development will be 20 to 25 acres and should consider the following:
 - Corporate quality landscaping.
 - Surface parking for 315 vehicles:
 - a. 60 to 70 City fleet cycling through for maintenance and repairs
 - b. 135 City fleet stored including 95 Public Service vehicles and 30 to 40 auction vehicles
 - c. 110 employee vehicles based on 210 employees based at this location

Parking at the site assumes employee vehicles are kept separate of the City fleet.
 - Fueling station with 3 above-ground fuel storage tanks @ 10K gallons each, and a free-standing, high bay, enclosed large-vehicle wash area (single stall).
 - Include lighting, security and fencing for entire site with separate fenced areas for fleet storage with operable gates.
 - A traffic study may be required depending on the site selected. The SCDOT will determine the scope. Costs should be covered by General Conditions and contingency in the cost model.
8. Building construction will be two-levels for office areas and high-bay single level for maintenance and warehouse areas all utilizing load-bearing masonry with brick veneer, structural steel interior framing, with a mix of standing seam roof (office portion) and EPDM for maintenance/warehouse areas. An elevator should be included in the office areas. A three-bay loading dock with individual dock levelers will be shared in the maintenance/warehouse spaces.
9. Specific building systems requirements above the standard for these types of spaces include:
 - a. HVAC system controls are to function through a central digital building energy management system (BEMS).
 - b. A central lighting control system is required for all spaces (possibly a module within the BEMS).
 - c. Emergency power is required for all spaces; estimate should assume one at 300 KW and one at 100 KW.



Public Services
Milford Street Operations Center Study

HEERY

Total costs include General Conditions and an estimate of all other soft costs (permits, A/E, other consultants), and a design contingency. Estimates utilize 2004 costs escalated through 2006 at 3% per year with construction time at approximately 14 months. This assumes the work would primarily take place in the 2006 fiscal year.

Recap Relocation to Site w/Existing Facilities (New Office and Exterior Warehouse. Renovate Maintenance and Interior Warehouse)

DESCRIPTION	AREA	UNIT	2004 TOTAL COST		2006 CONSTRUCTION COST		2006 TOTAL COST	
			Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF
Office Area-New	8,900	SF	1,591,972	\$178.87	1,373,288	\$154.30	1,688,923	\$189.77
Maintenance-Renovation	52,325	SF	4,546,746	\$86.89	3,922,175	\$74.96	4,823,643	\$92.19
Interior Warehouse-Renovation	36,750	SF	2,318,774	\$63.10	2,000,252	\$54.43	2,459,987	\$66.94
Exterior Warehouse-New	20,000	SF	1,265,633	\$63.28	1,091,777	\$54.59	1,342,710	\$67.14
Site Development and Utilities	117,975	SF	2,956,013	\$25.06	2,549,955	\$21.61	3,136,034	\$26.58
TOTALS	117,975	SF	\$12,679,137	\$107.47	\$10,937,447	\$92.71	\$13,451,296	\$114.02

Recap Relocation to New Site (New Office, Maintenance, Interior Warehouse and Exterior Warehouse)

DESCRIPTION	AREA	UNIT	2004 TOTAL COST		2006 CONSTRUCTION COST		2006 TOTAL COST	
			Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF
Office Area	12,200	SF	2,055,926	\$168.52	1,773,510	\$145.37	2,181,131	\$178.78
Maintenance	68,641	SF	9,150,108	\$133.30	7,893,189	\$114.99	9,707,350	\$141.42
Interior Warehouse	41,781	SF	4,261,781	\$102.00	3,676,355	\$87.99	4,521,324	\$108.21
Exterior Warehouse	20,000	SF	1,265,633	\$63.28	1,091,777	\$54.59	1,342,710	\$67.14
Site Development and Utilities	142,622	SF	3,069,913	\$21.52	2,648,210	\$18.57	3,256,871	\$22.84
TOTALS	142,622	SF	\$19,803,361	\$138.85	\$17,083,041	\$119.79	\$21,009,386	\$147.31



**Public Services
Milford Street Operations Center Study**

HEERY

Alternate Option and Associated Costs

An alternative to utilization of the existing site considers relocation of some functions from Milford Street Operations Center to other existing facilities in the vicinity. Outsourcing fleet maintenance functions or entering an inter-local agreement to utilize the County facilities would reduce the land and facility space requirements for a Public Services Operations Center through 2015. Consolidating fleet maintenance to another City facility (Police, Fire, or Parks) or this combined with outsourcing may reduce the space requirements making an alternative site to Milford Street more viable. Some review of the fleet service capabilities at other sites would need to be studied and this assumes that some of the existing Milford Street functions would be moved to an alternate site anyway (i.e. Fire training).

Land and Facility space requirements for Milford Street functions without Fleet Services and Fire Training are summarized in the table extract below developed from the summary provided earlier in this report.

User Groups	Site Size (LF)		Bldg. Area SF (est.)	Site Area (1)		Total Area	
	W	L		SF	ACRES	ACRES	Comments
I-26 ROW (2)	385	208		79,888	1.83	1.83	T&T Sanitation Parts, Welding, S&S Trailers
City Stores	170	155	18,000	26,350	0.60	0.60	
Auction Storage	245	50		12,250	0.28		
	70	350		24,500	0.56		
	175	290		50,750	1.17	2.01	
Radio Shop	70	180	Incl. below	12,600	0.29	0.29	
Paint Shop	100	180	4,000	18,000	0.41	0.41	
Environmental Services	55	255	45,625	14,025	0.32		
	360	110		39,600	0.91		
	120	200		24,000	0.55		
	45	85		3,825	0.09	1.87	
Public Services Administration	210	200	10,400	42,000	0.96		
	70	90		6,300	0.14	1.11	
Parks & Recreation	65	25		1,625	0.04		
	160	75		12,000	0.28	0.31	
Stormwater	60	240		14,400	0.33	0.33	
	390	130		50,700	1.16	1.16	
CDL Testing Area (3)	295	195		57,525	1.32	1.32	

Subtotal Defined User Space 78,025 11.26
 Total Area (parcel) 18.20 Existing Parcel
 Defined User Space 11.26 Reduced by 2.28 acres

Combined PSO - Parking, Laydown & Storage 2.66 Remove 2 acres for Fleet Services parking
 Footnotes: Total Area 13.92 Estimate required

- (1) These areas include buildings, impervious surface, greenspace, stormwater channels, etc.
 (2) R of W = Right-of-Way
 (3) CDL = Commercial Drivers License



Public Services
Milford Street Operations Center Study

HEERY

Based on review of alternative space requirements, the site size can be reduced from approximately 20 acres to approximately 15 acres to meet a 20-year growth projection and set-backs due to environmental requirements. Current facility space requirements could be adjusted from 142,622 GSF to approximately 121,915 GSF to relocate current Milford Street Operations functions to a new site without Fleet Management maintenance requirements.

The New Site replacement cost model included construction of 20 service bays while the Existing Site Renovation could accommodate approximately 15 service bays. Removing these from the facility space requirements for an alternative site would reduce the future facility space requirements from 142,622 GSF to approximately 122,000 GSF. This removes the requirement for 865 GSF of Office and 19,842 GSF of Maintenance functions.

A new site to accommodate Milford Street functions (less Fleet and Fire) and growth through 2015 should have a minimum of 15 acres and accommodate total facility space requirements in the range of 122,000 GSF. The cost estimate can be adjusted based on the reduced site development and overall space requirements. Fleet lifts and exhaust ventilation requirements are removed from the fixed equipment requirements of the Maintenance functions.

Recap Relocation to New Site (New Office, Maintenance, Interior Warehouse and Exterior Warehouse without Fleet and Fire)

DESCRIPTION	AREA	UNIT	2004		2006		2008	
			CONSTRUCTION COST		CONSTRUCTION COST		TOTAL COST	
			Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF
Office Area	11,335	SF	1,570,632	\$138.56	1,666,284	\$147.00	2,049,260	\$180.79
Maintenance	48,799	SF	4,869,383	\$99.78	5,165,928	\$105.86	6,353,259	\$130.19
Interior Warehouse	41,781	SF	3,465,317	\$82.94	3,676,355	\$87.99	4,521,324	\$108.21
Exterior Warehouse	20,000	SF	1,029,105	\$51.46	1,091,777	\$54.59	1,342,710	\$67.14
Site Development and Utilities	121,915	SF	2,362,476	\$19.38	2,506,351	\$20.56	3,082,407	\$25.28
TOTALS	121,915	SF	\$13,296,913	\$109.07	\$14,106,695	\$115.71	\$17,346,960	\$142.30

The current Milford Street site includes 18.20 acres of which 17.76 can be used without mitigation. The Greenleaf site includes 11.75 acres of which 8.27 acres can be used without mitigation. We have determined that the current Milford Street functions with anticipated growth through 2015 (less Fire Training) can be accommodated on a site of approximately 20 acres. If Fleet were removed from the current site, approximately 3.29 acres can be reclaimed. For the future space needs through 2015, outsourcing Fleet would 'free-up' about 5 acres and 20,000 SF of facility space requirements.

The revised Milford Street requirements for 2015 without Fleet, includes a minimum of 15 acres and 121,915 GSF of facility space in order to support the remaining Milford Street Operations functions. This assumes the auction storage function remains, however if this were also allocated to another site, the overall land requirement would be reduced to approximately 13 acres.

The revised cost estimate based on 15 acres and approximately 122,000 GSF of facility space, is about midway between the Existing and New site scenarios for Milford Street Operations functions. If Fleet were outsourced, the aggregate operational costs would likely fill some of the perceived 'savings'.

Even with full mitigation, the Greenleaf site can only provide 11.75 acres for development and therefore, does not appear to be a viable alternative considering the above-referenced operational changes.



Recommendations***Milford Street Site***

As an integral part of the overall Government Space Utilization Study, Heery has obtained and evaluated the current and future space requirements for groups operating at the current Milford Street Operations Center (referred to as the City Garages). Our experience with similar municipal facilities suggests that these types of operations remain most efficient when public works activities are consolidated and co-located with equipment storage, repair and maintenance, warehousing, and related office functions. In this case, Department of Public Service operational groups (Administration, Fleet, Stormwater, Streets & Sidewalks, and Environmental Services) are co-located with components of other City Departments (Traffic & Transportation, Police, Parks, and the Fire Department) that require similar support and/or facilities used by Public Service operations.

Heery recommends that the Public Service operations and related City departments at the Milford Street location not be relocated to the Greenleaf Street property. The Greenleaf Street Property has a smaller area that can be utilized and to relocate to this site will require the City drastically alter the current public works land and facilities utilization practices. A move to the Greenleaf Street Property will require that some activities, such as the Fire Department Training Area, the warehousing functions and/or other activities which are currently located at the Milford Street complex, be relocated to another property.

If the Milford Street operations location must be converted to another use and the City is required to relocation, we strongly urge the City to find an alternative site that can accommodate the desired adjacencies and future growth requirements. This should as a minimum, include facilities space and land area for all Public Service Department Divisions, T&T Department, Police Department, and Parks Department functions. The City should recognize that it essentially needs a Public Works complex or Operations Center to centralize these functions regardless of the location.

Recommended Implementation Plan

After evaluation of the various options for this site, and considering the land and facility space requirements that can be met at the Milford Street location through 2015, Heery recommends the City implement the following activities:

1. Address environmental concerns at the site by implementing the Earth Tech Storm Water Pollution Prevention Plan to eliminate further storm water pollution.
2. A long term plan should be developed to contain and remove sediment and other site related pollutants from storm water runoff to bring the site into compliance with current and future NPDES requirements.
3. Delineation of jurisdictional resources must be completed in order to determine if permit applications will need to be submitted to state and Federal regulatory agencies.



**Public Services
Milford Street Operations Center Study**

HEERY

4. Develop a Master Site Utilization Plan to organize the site operations, staging, and storage requirements to improve area utilization, vehicle circulation, lay-down areas, facility requirements and placement, and the efficiency of on-site operations. Current requirements for material lay down and equipment areas for each separate operation should be reviewed so that additional usable site area can be organized accordingly.
5. Upgrade the security of the site. The existing chain-link fence does not provide adequate security for the complex. A higher level of security should be provided to protect City employees and property.
6. Construct a larger, more efficient vehicle and equipment wash station.
7. Provide space for the relocation of the T&T Signal Shop from 656 King Street prior to that facility lease expiration. Temporary facilities could be accommodated in the City Stores building; however that facility should be replaced within the next 5 to 7 years.
8. An assessment should be undertaken to identify and document if and where soil and/or water pollution from petroleum products, paint products or other substances has taken place, due to past and current operations. The assessment will also determine if remediation of the site will be required prior to further development.
9. Relocate the Fire Department training functions within next 2 years to provide space required for Public Service operations. Existing fire training tower has been grand-fathered to waive environmental clean-air requirements. This waiver is likely not to perpetuity thereby requiring, at some point, compliance with EPA standards.
10. Handicap accessibility to each building and to each operations area should be reviewed and adjustments to bring the entire site into compliance with current ADA requirements.



**Public Services
Milford Street Operations Center Study**

HEERY

Greenleaf Street Site

If the City decides to move forward with the relocation of the Milford Street Public Service Operations Site to the Greenleaf Street Property, Heery recommends that the City comply with the five recommendations listed below. The City should evaluate the results of these recommendations and the impacts on proposed site development prior to entering real estate negotiations.

Only a portion of the current Milford Street Operations Center activities can fit on this site. In addition, there are several issues that will need to be addressed by the current landowner as due diligence by the City relative to an acquisition:

1. The suspected wetlands on the site should be officially delineated to understand the impact on future site utilization.
2. A geotechnical exploration survey/study should be conducted to determine existing subsurface conditions and the impact the subsurface material will have on development of the site (construction cost).
3. A boundary and topographical survey of the proposed property should be executed to identify the exact boundary of flood zones and delineated wetlands in order to fully understand the property restrictions and constraints.
4. The current property owner should be required to supply a detailed environmental assessment (Phase II) of the property to determine if, in fact, contamination (ROC) does exist on the site, what, if any remediation will be required, who will be required to fund the remediation, and when the remediation will be completed so that site development may proceed.
5. A full understanding of the long term legal restrictions and requirements associated with the existing monitoring wells should be defined to understand the constraints these may impose on site development.



Appendix A - Bibliography

References and Documentation used to complete this study:

1. Milford Street Parcels, GIS Map, City Of Charleston, SC
2. Greenleaf Street Parcel, Meeting Street and Algonquin Area, GIS Map, City of Charleston, SC
3. Official Zoning Map, Grid 3326, City of Charleston, SC
4. Site Regulations Documents, Dept. of Design, Development and Preservation, City of Charleston, SC
5. Milford Street Parcel Map, Dated: 30 June, 1966, Office of Means Conveyance, City of Charleston, SC
6. Parcel Maps and Information, Property Information System, County of Charleston, SC
7. Topography, USGS Charleston Quad Map
8. Flood Zone Maps, FEMA Map, Panel No. 455412 0015D, Dated Nov. 5, 1986
9. Storm Water Pollution Prevention Plan, Dated: January (Revised February 2004), EARTH TECH Project No. 70528
10. Plat of Tracts I through VII, Dated: September 23, 1992, George A. Z. Johnson, Jr. Inc., Land Surveyors
11. Real Property Record (Card), TM No. 464-00-00-033, County of Charleston, SC
12. Photographs taken 08/30/04-09/01/04 by the Heery Assessment Team, Heery International, Inc.
13. Stormwater Drainage, Section 7.2 Engineering Division, City Of Charleston, SC
14. Phase I - Environmental Site Assessment, The Greenleaf Street Property and The Greenleaf Street II Property, General Engineering & Environmental, LLC, Selected pages provided by Department of Budget, Finance, and Revenue Collection, City of Charleston, SC
15. Release, Indemnity and Hold Harmless Agreements, Dated, 28 February, 1997, between BEAZER EAST, INC. and the City Council of Charleston
16. Release, Indemnity and Hold Harmless Agreements, Dated, 30 January, 1998, between BEAZER EAST, INC. and the Commissioners of Public Works of the City of Charleston
17. 100 % NAPL/Groundwater Remedial Design Drawings and Report, Former Koppers Company, Inc. Site: Charleston, South Carolina, Prepared for: BEAZER, KEY Environmental, Incorporated



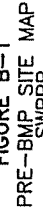
Public Services
Milford Street Operations Center Study

HEERY

Appendix B - Site Plans

1. Milford Street GIS Parcels Map
2. Milford Street Plat
3. Greenleaf Site GIS Parcels Map
4. Greenleaf Site Plat
5. Milford Street Operations Center Annotated Site Plan





Public Services
Milford Street Operations Center Study

HEERY

Appendix C - Photographs

1. Milford Street Operations Center – Existing Conditions Photographs *
2. Greenleaf Street proposed site Photographs

** Refer to the Milford Street Operations Center Annotated Site Plan in Appendix B for area notations on these photographs.*



Public Services
Milford Street Operations Center Study

HEERY

Appendix D – Cost Detail

1. Relocation of Milford Street Operations Center functions to a site with Existing Facilities and Infrastructure.
2. Relocation of Milford Street Operations Center functions to New Site considering Space Requirements through 2015.
3. Relocation of Milford Street Operations Center functions to New Site without Fleet Maintenance considering Space Requirements through 2015.



DATE: 16-May-05
 COST ANALYST: Carrl Kersey
 PHASE: COST MODEL
 TIME: 2:50 PM

PROJECT : 04107-00
 City of Charleston - Milford Street Operations Center
 South Carolina
 Recap Relocation to Site w/Existing Facilities (New Office and Exterior Warehouse. Renovate Maintenance and Interior Warehouse)

DESCRIPTION	AREA	UNIT	2004		2004		2005		2005		2005		2006	
			CONSTRUCTION COST		TOTAL COST		CONSTRUCTION COST		TOTAL COST		CONSTRUCTION COST		TOTAL COST	
			Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF	Cost	Cost/SF
Office Area-New	8,900	SF	1,294,456	\$145.44	1,591,972	\$178.87	1,333,289	\$149.81	1639731	\$184.24	1,373,288	\$154.30	1,688,923	\$189.77
Maintenance-Renovation	52,325	SF	3,697,026	\$70.66	4,546,746	\$86.89	3,807,937	\$72.77	4683148	\$89.50	3,922,175	\$74.96	4,823,643	\$92.19
Interior Warehouse-Renovation	36,750	SF	1,885,429	\$51.30	2,318,774	\$63.10	1,941,992	\$52.84	2388337	\$64.99	2,000,252	\$54.43	2,459,987	\$66.94
Exterior Warehouse-New	20,000	SF	1,029,105	\$51.46	1,265,633	\$63.28	1,059,978	\$53.00	1303602	\$65.18	1,091,777	\$54.59	1,342,710	\$67.14
Site Development and Utilities	117,975	SF	2,403,577	\$20.37	2,956,013	\$25.06	2,475,685	\$20.98	3044693	\$25.81	2,549,955	\$21.61	3,136,034	\$26.58
TOTALS	117,975	SF	\$10,309,593	\$87.39	\$12,679,137	\$107.47	\$10,618,881	\$90.01	\$13,059,511	\$110.70	\$10,937,447	\$92.71	\$13,451,296	\$114.02

TOTAL COST

Project: 04107-00
 CITY OF CHARLESTON, SC
 MILFORD STREET OPERATIONS CENTER
 NEW CONSTRUCTION - OFFICE BLDG
 COST MODEL - TWO STORIES LOAD BEARING MASONRY BUILDING

DATE: 16-May-05
 ANALYST: Carr/ Kersey
 PHASE: CM
 TIME: 2:50 PM

CODE	NEW CONSTRUCTION - OFFICE BLDG DESCRIPTION	COST MODEL		
		GSF	8,900	
		COST	\$/GSF	%
	BUILDING CONSTRUCTION:			
A	GENERAL CONDITIONS	\$ 133,500	\$ 15.00	11%
B	BUILDING FOOTING & SLAB	\$ 51,362	\$ 5.77	4%
C	STRUCTURAL SYSTEM	\$ 87,665	\$ 9.85	7%
D	ROOFING	\$ 65,907	\$ 7.41	5%
E	EXTERIOR WALL	\$ 183,219	\$ 20.59	15%
F	EXTERIOR DOORS & OPENING	\$ 65,364	\$ 7.34	5%
G	INTERIOR DOORS & OPENING	\$ 41,495	\$ 4.66	3%
H	INTERIOR PARTITIONS	\$ 57,280	\$ 6.44	5%
I	WALL FINISHES	\$ 32,173	\$ 3.61	3%
J	FLOOR FINISHES	\$ 39,705	\$ 4.46	3%
K	CEILINGS & SOFFITS	\$ 34,619	\$ 3.89	3%
L	INTERIOR STAIRS & RAILING	\$ 34,400	\$ 3.87	3%
M	ACCESSORIES & SPECIALTIES	\$ 24,188	\$ 2.72	2%
N	FIXED EQUIPMENT	\$ 4,450	\$ 0.50	0%
O	CASEWORK & MILLWORK	\$ 22,250	\$ 2.50	2%
P	LOOSE EQUIPMENT & FURNISHINGS	\$ 18,413	\$ 2.07	1%
Q	MECHANICAL CONVEYANCES	\$ 32,000	\$ 3.60	3%
R	WATER SUPPLY & TREATMENT	\$ -	\$ -	0%
S	WASTE WATER DISPOSAL	\$ -	\$ -	0%
T	PLUMBING	\$ 42,275	\$ 4.75	3%
U	FIRE PROTECTION	\$ 13,350	\$ 1.50	1%
V	H.V.A.C. SYSTEM	\$ 133,500	\$ 15.00	11%
W	ELECTRICAL SYSTEM	\$ 44,500	\$ 5.00	4%
X	LIGHTING	\$ 26,700	\$ 3.00	2%
Y	SPECIAL SYSTEM COMMUNICATION	\$ 44,500	\$ 5.00	4%
	SUB-TOTAL BUILDING	\$ 1,232,815	\$ 138.52	100%
5%	DESIGN CONTINGENCY - BUILDING	\$ 61,641	\$ 6.93	
0%	ESCALATION - BUILDING	\$ -	\$ -	
	TOTAL CONSTRUCTION CONTRACT AWARD PRICE	\$ 1,294,456	\$ 145.44	

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

NEW CONSTRUCTION - OFFICE BLDG

TIME: 2:51 PM

COST MODEL - TWO STORIES LOAD BEARING MASONRY BUILDING

GSF= 8900

CODE	NEW CONSTRUCTION - OFFICE BLDG DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
A	GENERAL CONDITIONS:				\$ -	\$ 133,500
	GENERAL CONDITIONS, OVERHEAD, PROFIT, BOND	8,900	SF	\$ 15.00	\$ 133,500	\$ 133,500
					\$ -	\$ -
					\$ -	\$ -
B	BUILDING FOOTING & SLAB:				\$ -	\$ 51,362
	EXT. WALL FOOTING	301	LF	\$ 20.00	\$ 6,027	\$ 6,027
	INT. WALL FOOTING	452	LF	\$ 15.00	\$ 6,780	\$ 6,780
	SPREAD FOOTING	1,113	SF	\$ 14.00	\$ 15,575	\$ 15,575
	FOUNDATION WALL - CONCRETE	-	SF	\$ 20.00	\$ -	\$ -
	FOUNDATION WALL - CMU	603	SF	\$ 10.00	\$ 6,027	\$ 6,027
	ELEVATOR PIT	100	SF	\$ 30.00	\$ 3,000	\$ 3,000
	PERIMETER INSULATION	603	SF	\$ 1.00	\$ 603	\$ 603
	SLAB ON GRADE	4,450	SF	\$ 3.00	\$ 13,350	\$ 13,350
					\$ -	\$ -
					\$ -	\$ -
C	STRUCTURAL SYSTEM:				\$ -	\$ 87,665
	STRUCTURAL STEEL	9	TON	\$ 1,800.00	\$ 16,020	\$ 16,020
	STEEL JOIST	9	TON	\$ 1,400.00	\$ 12,460	\$ 12,460
	STEEL TRUSS	4	TON	\$ 2,000.00	\$ 8,900	\$ 8,900
	MISC. STEEL	4	TON	\$ 1,900.00	\$ 8,455	\$ 8,455
	TECTUM DECKING	-	SF	\$ 4.00	\$ -	\$ -
	METAL FLOOR DECK	4,450	SF	\$ 2.00	\$ 8,900	\$ 8,900
	METAL ROOF DECK	4,450	SF	\$ 2.00	\$ 8,900	\$ 8,900
	CONC. SLAB ON METAL DECK	4,450	SF	\$ 3.00	\$ 13,350	\$ 13,350
	FIRE PROOFING	8,900	SF	\$ 1.20	\$ 10,680	\$ 10,680
					\$ -	\$ -
					\$ -	\$ -
D	ROOFING:				\$ -	\$ 65,907
	METAL ROOFING - 100%	5,118	SF	\$ 8.00	\$ 40,940	\$ 40,940
	BUILT-UP ROOFING - 0%	-	SF	\$ 4.00	\$ -	\$ -
	RIGID ROOF DECK INSULATION	5,118	SF	\$ 1.25	\$ 6,397	\$ 6,397
	ROOF SHEATHING	5,118	SF	\$ 1.00	\$ 5,118	\$ 5,118
	FASCIA & CAP FLASHING	603	SF	\$ 10.00	\$ 6,027	\$ 6,027
	ALUM. GUTTER & DOWNSPOUT	512	LF	\$ 10.00	\$ 5,118	\$ 5,118
	WOOD BLOCKING	2	MBF	\$ 1,200.00	\$ 1,808	\$ 1,808
	MISC. ROOF ACCESSORIES	1	LS	\$ 500.00	\$ 500	\$ 500
					\$ -	\$ -
					\$ -	\$ -
E	EXTERIOR WALL:				\$ -	\$ 183,219
	CMU BACK-UP - 100%	8,438	SF	\$ 7.00	\$ 59,064	\$ 59,064
	FURR & DRYWALL	6,750	SF	\$ 2.50	\$ 16,875	\$ 16,875
	METAL STUD & SHEATHING BACK-UP - 0%	-	SF	\$ 4.50	\$ -	\$ -
	BRICK	8,438	SF	\$ 9.00	\$ 75,940	\$ 75,940
	PRECAST BAND	-	LF	\$ 30.00	\$ -	\$ -
	PRECAST BASE & ACCENT	-	SF	\$ 25.00	\$ -	\$ -
	GROUT BLOCK	4,219	LF	\$ 2.00	\$ 8,438	\$ 8,438
	GROUT LINTEL	904	LF	\$ 2.00	\$ 1,808	\$ 1,808
	WINDOW SILL	301	LF	\$ 20.00	\$ 6,027	\$ 6,027
	METAL SIDING / PANEL	-	SF	\$ 5.00	\$ -	\$ -
	RIGID INSULATION	8,438	SF	\$ 1.20	\$ 10,125	\$ 10,125
	BATT INSULATION	-	SF	\$ 0.60	\$ -	\$ -
	FLASHING	1,205	SF	\$ 2.00	\$ 2,411	\$ 2,411
	DAMP-PROOFING / FELT	8,438	SF	\$ 0.30	\$ 2,531	\$ 2,531
					\$ -	\$ -
					\$ -	\$ -
F	EXTERIOR DOORS & OPENING:				\$ -	\$ 65,364
	H.M. DOOR, FRAME & HARDWARE	2	EA	\$ 1,200.00	\$ 1,800	\$ 1,800
	ALUM. / ENTRANCE DOOR, FRAME & HARDWARE	2	EA	\$ 3,000.00	\$ 4,500	\$ 4,500
	ALUM. WINDOW	1,688	SF	\$ 35.00	\$ 59,064	\$ 59,064
					\$ -	\$ -
					\$ -	\$ -

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

NEW CONSTRUCTION - OFFICE BLDG

TIME: 2:51 PM

COST MODEL - TWO STORIES LOAD BEARING MASONRY BUILDING

GSF= 8900

CODE	NEW CONSTRUCTION - OFFICE BLDG DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
G	INTERIOR DOORS & OPENINGS:				\$ -	\$ 41,495
	H.M. DOOR, FRAME & HARDWARE	3	EA	\$ 1,100.00	\$ 3,630	\$ 3,630
	WOOD DOOR, HM FRAME & HARDWARE	30	EA	\$ 1,200.00	\$ 35,640	\$ 35,640
	ALUM. WINDOW	89	SF	\$ 25.00	\$ 2,225	\$ 2,225
					\$ -	\$ -
H	INTERIOR PARTITIONS:				\$ -	\$ 57,280
	CMU PARTITION - 10%	1,068	SF	\$ 7.00	\$ 7,476	\$ 7,476
	DRYWALL PARTITION - 90%	9,612	SF	\$ 4.00	\$ 38,448	\$ 38,448
	FURR CMU WALL & DRYWALL - 80%	1,709	SF	\$ 2.50	\$ 4,272	\$ 4,272
	GROUT BLOCK	267	SF	\$ 2.00	\$ 534	\$ 534
	GROUT BOND BEAM	71	LF	\$ 2.00	\$ 142	\$ 142
	FOLDING PARTITION	160	SF	\$ 40.00	\$ 6,408	\$ 6,408
					\$ -	\$ -
					\$ -	\$ -
I	WALL FINISHES:				\$ -	\$ 32,173
	PAINT WALL - REGULAR - 75%	20,113	SF	\$ 0.45	\$ 9,051	\$ 9,051
	PAINT WALL - EPOXY - 10%	2,682	SF	\$ 0.75	\$ 2,011	\$ 2,011
	VYNIL WALL COVERING - 10%	2,682	SF	\$ 2.00	\$ 5,364	\$ 5,364
	ACOUSTICAL / WOOD PANEL - 2%	536	SF	\$ 15.00	\$ 8,045	\$ 8,045
	CERAMIC TILE - 3%	805	SF	\$ 7.00	\$ 5,632	\$ 5,632
	PAINT DOOR & FRAMES	35	EA	\$ 60.00	\$ 2,070	\$ 2,070
					\$ -	\$ -
					\$ -	\$ -
J	FLOOR & BASE FINISHES:				\$ -	\$ 39,705
	CARPET - 80%	718	SY	\$ 30.00	\$ 21,540	\$ 21,540
	VCT - 10%	890	SF	\$ 1.50	\$ 1,335	\$ 1,335
	RUBBER BASE	1,068	LF	\$ 1.20	\$ 1,282	\$ 1,282
	CERAMIC FLOOR TILE - 5%	445	SF	\$ 8.00	\$ 3,560	\$ 3,560
	QUARRY FLOOR TILE - 5%	445	SF	\$ 10.00	\$ 4,450	\$ 4,450
	RUBBER FLOORING @ STAIR LANDING	480	SF	\$ 5.00	\$ 2,400	\$ 2,400
	STAIR TREAD & RISER	336	LF	\$ 15.00	\$ 5,040	\$ 5,040
	SEAL CONCRETE FLOOR - 2%	178	SF	\$ 0.55	\$ 98	\$ 98
					\$ -	\$ -
					\$ -	\$ -
K	CEILINGS & SOFFITS:				\$ -	\$ 34,619
	ACOUSTICAL CEILING- 80%	7,120	SF	\$ 2.50	\$ 17,800	\$ 17,800
	DRYWALL CEILING - 20%	1,780	SF	\$ 6.00	\$ 10,680	\$ 10,680
	DRYWALL BULKHEAD	445	SF	\$ 10.00	\$ 4,450	\$ 4,450
	EXTERIOR METAL SOFFIT	452	SF	\$ 3.50	\$ 1,582	\$ 1,582
	PAINT EXPOSED CEILING	178	SF	\$ 0.60	\$ 107	\$ 107
					\$ -	\$ -
					\$ -	\$ -
L	INTERIOR STAIRS & RAILINGS:				\$ -	\$ 34,400
	STEEL PIPE RAILING	140	LF	\$ 40.00	\$ 5,600	\$ 5,600
	STEEL STAIRS	336	LF	\$ 50.00	\$ 16,800	\$ 16,800
	STAIR LANDING	480	SF	\$ 25.00	\$ 12,000	\$ 12,000
					\$ -	\$ -
					\$ -	\$ -
M	ACCESSORIES & SPECIALTIES:				\$ -	\$ 24,188
	PROJECTION SCREEN	1	EA	\$ 1,500.00	\$ 954	\$ 954
	FIRE EXTINGUISHER & CABINET	4	EA	\$ 260.00	\$ 1,157	\$ 1,157
	DIRECTORY & PLAQUE	1	LS	\$ 5,000.00	\$ 5,000	\$ 5,000
	TOILET PARTITION	4	EA	\$ 1,200.00	\$ 5,340	\$ 5,340
	TOILET ACCESSORIES	7	SET	\$ 500.00	\$ 3,338	\$ 3,338
	ROOM SIGNS	35	EA	\$ 50.00	\$ 1,725	\$ 1,725
	SPECIAL SIGNAGE	8,900	SF	\$ 0.75	\$ 6,675	\$ 6,675
					\$ -	\$ -
N	FIXED EQUIPMENT:				\$ -	\$ 4,450
	MISC EQUIPMENT ALLOWANCE	8,900	SF	\$ 0.50	\$ 4,450	\$ 4,450
					\$ -	\$ -
					\$ -	\$ -

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

NEW CONSTRUCTION - OFFICE BLDG

TIME: 2:51 PM

COST MODEL - TWO STORIES LOAD BEARING MASONRY BUILDING

GSF= 8900

CODE	NEW CONSTRUCTION - OFFICE BLDG DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
O	CASEWORK & MILLWORK:				\$ -	\$ 22,250
	MISC. GENERAL CASEWORK ALLOWANCE	8,900	SF	\$ 2.50	\$ 22,250	\$ 22,250
					\$ -	\$ -
					\$ -	\$ -
P	LOOSE EQUIPMENT & FURNISHINGS:				\$ -	\$ 18,413
	BLIND	1,688	SF	\$3.00	\$ 5,063	\$ 5,063
	MISC. GENERAL FURNISHING ALLOWANCE	8,900	SF	\$ 1.50	\$ 13,350	\$ 13,350
					\$ -	\$ -
					\$ -	\$ -
Q	MECHANICAL CONVEYANCES:				\$ -	\$ 32,000
	ELEVATOR	1	EA	\$ 32,000.00	\$ 32,000	\$ 32,000
					\$ -	\$ -
					\$ -	\$ -
T	PLUMBING:				\$ -	\$ 42,275
	PLUMBING	8,900	SF	\$4.75	\$ 42,275	\$ 42,275
					\$ -	\$ -
					\$ -	\$ -
U	FIRE PROTECTION:				\$ -	\$ 13,350
	SPRINKLER SYSTEM	8,900	SF	\$1.50	\$ 13,350	\$ 13,350
					\$ -	\$ -
					\$ -	\$ -
V	H.V.A.C. SYSTEM:				\$ -	\$ 133,500
	HVAC SYSTEM	8,900	SF	\$15.00	\$ 133,500	\$ 133,500
					\$ -	\$ -
					\$ -	\$ -
W	ELECTRICAL SYSTEM:				\$ -	\$ 44,500
	ELECTRICAL SYSTEM	8,900	SF	\$5.00	\$ 44,500	\$ 44,500
					\$ -	\$ -
					\$ -	\$ -
X	LIGHTING:				\$ -	\$ 26,700
	ELECTRICAL FIXTURES	8,900	SF	\$3.00	\$ 26,700	\$ 26,700
					\$ -	\$ -
					\$ -	\$ -
Y	SPECIAL SYSTEM & COMMUNICATION:				\$ -	\$ 44,500
	SPECIAL SYSTEM - INFRASTRUCTURE	8,900	SF	\$3.00	\$ 26,700	\$ 26,700
	SPECIAL SYSTEM - EMERGENCY GENERATOR	8,900	SF	\$2.00	\$ 17,800	\$ 17,800
					\$ -	\$ -
SUB TOTAL BUILDING					\$ 1,232,815	\$ 1,232,815
					\$ -	\$ -
A	SITE GENERAL CONDITIONS & FEES:				\$ -	\$ -
	SITE GENERAL CONDITIONS & FEES	8,900	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
Z1	SPECIAL SITE CONDITIONS/DEMOLITION:				\$ -	\$ -
	SPECIAL SITE PREPARATION / FOUNDATION ALLOWANCE	8,900	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
Z2	SITE DEVELOPMENT:				\$ -	\$ -
	SITE DEVELOPMENT	8,900.0	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
AA	SITE UTILITIES:				\$ -	\$ -
	SITE UTILITIES	8,900	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
SUB TOTAL SITE					\$ -	\$ -
TOTAL BUILDING & SITE					\$ 1,232,815	\$ 1,232,815

Project: 04107-00
 CITY OF CHARLESTON, SC
 MILFORD STREET OPERATIONS CENTER
 RENOVATION - MAINTENANCE BLDG.

DATE: 16-May-05
 ANALYST: Carr/ Kersey
 PHASE: CM
 TIME: 2:52 PM

COST MODEL - EXISTING ONE STORY HIGH BAY STEEL FRAMED BUILDING

CODE	RENOVATION - MAINTENANCE BLDG. DESCRIPTION	COST MODEL		
		GSF	52,325	
		COST	\$/GSF	%
	BUILDING CONSTRUCTION:			
A	GENERAL CONDITIONS	\$ 470,925	\$ 9.00	14%
B	BUILDING FOOTING & SLAB	\$ 108,488	\$ 2.07	3%
C	STRUCTURAL SYSTEM	\$ 54,941	\$ 1.05	2%
D	ROOFING	\$ 27,471	\$ 0.53	1%
E	EXTERIOR WALL	\$ 51,418	\$ 0.98	2%
F	EXTERIOR DOORS & OPENING	\$ 151,021	\$ 2.89	4%
G	INTERIOR DOORS & OPENING	\$ 74,043	\$ 1.42	2%
H	INTERIOR PARTITIONS	\$ 130,017	\$ 2.48	4%
I	WALL FINISHES	\$ 67,459	\$ 1.29	2%
J	FLOOR FINISHES	\$ 28,779	\$ 0.55	1%
K	CEILINGS & SOFFITS	\$ 82,674	\$ 1.58	2%
L	INTERIOR STAIRS & RAILING	\$ -	\$ -	0%
M	ACCESSORIES & SPECIALTIES	\$ 10,373	\$ 0.20	0%
N	FIXED EQUIPMENT	\$ 538,081	\$ 10.28	16%
O	CASEWORK & MILLWORK	\$ 52,325	\$ 1.00	2%
P	LOOSE EQUIPMENT & FURNISHINGS	\$ 15,549	\$ 0.30	0%
Q	MECHANICAL CONVEYANCES	\$ -	\$ -	0%
R	WATER SUPPLY & TREATMENT	\$ -	\$ -	0%
S	WASTE WATER DISPOSAL	\$ -	\$ -	0%
T	PLUMBING	\$ 261,625	\$ 5.00	8%
U	FIRE PROTECTION	\$ 117,731	\$ 2.25	4%
V	H.V.A.C. SYSTEM	\$ 673,250	\$ 12.87	20%
W	ELECTRICAL SYSTEM	\$ 170,056	\$ 3.25	5%
X	LIGHTING	\$ 130,813	\$ 2.50	4%
Y	SPECIAL SYSTEM COMMUNICATION	\$ 143,894	\$ 2.75	4%
	SUB-TOTAL BUILDING	\$ 3,360,933	\$ 64.23	100%
10%	DESIGN CONTINGENCY - BUILDING	\$ 336,093	\$ 6.42	
0%	ESCALATION - BUILDING	\$ -	\$ -	
	TOTAL CONSTRUCTION CONTRACT AWARD PRICE	\$ 3,697,026	\$ 70.66	

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

RENOVATION - MAINTENANCE BLDG.

TIME: 2:52 PM

COST MODEL - EXISTING ONE STORY HIGH BAY STEEL FRAMED BUILDING

GSF= 52325

CODE	RENOVATION - MAINTENANCE BLDG DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
A	GENERAL CONDITIONS:				\$ -	\$ 470,925
	GENERAL CONDITIONS, OVERHEAD, PROFIT, BOND	52,325	SF	\$ 9.00	\$ 470,925	\$ 470,925
					\$ -	\$ -
					\$ -	\$ -
B	BUILDING FOOTING & SLAB:				\$ -	\$ 108,488
	FLOOR CUT, PATCH & REPAIR ALLOWANCE	7,849	SF	\$ 10.00	\$ 78,488	\$ 78,488
	EXT. WALL FOOTING	-	LF	\$ 20.00	\$ -	\$ -
	INT. WALL FOOTING	-	LF	\$ 15.00	\$ -	\$ -
	SPREAD FOOTING	-	SF	\$ 14.00	\$ -	\$ -
	FOUNDATION WALL - CONCRETE	-	SF	\$ 20.00	\$ -	\$ -
	FOUNDATION WALL - CMU	-	SF	\$ 10.00	\$ -	\$ -
	SERVICE PIT	1,000	SF	\$ 30.00	\$ 30,000	\$ 30,000
	PERIMETER INSULATION	-	SF	\$ 1.00	\$ -	\$ -
	SLAB ON GRADE	-	SF	\$ 3.00	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
C	STRUCTURAL SYSTEM:				\$ -	\$ 54,941
	STRUCTURAL MODIFICATION/ REPAIR ALLOWANCE	7,849	SF	\$ 7.00	\$ 54,941	\$ 54,941
	STRUCTURAL STEEL	-	TON	\$ 1,800.00	\$ -	\$ -
	STEEL JOIST	-	TON	\$ 1,400.00	\$ -	\$ -
	STEEL TRUSS	-	TON	\$ 2,000.00	\$ -	\$ -
	MISC. STEEL	-	TON	\$ 1,900.00	\$ -	\$ -
	TECTUM DECKING	-	SF	\$ 4.00	\$ -	\$ -
	METAL FLOOR DECK	-	SF	\$ 2.00	\$ -	\$ -
	METAL ROOF DECK	-	SF	\$ 2.00	\$ -	\$ -
	CONC. SLAB ON METAL DECK	-	SF	\$ 3.00	\$ -	\$ -
	FIRE PROOFING	-	SF	\$ 1.20	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
D	ROOFING:				\$ -	\$ 27,471
	ROOFING REPAIR/PATCH ALLOWANCE	7,849	SF	\$ 3.50	\$ 27,471	\$ 27,471
	METAL ROOFING - 0%	-	SF	\$ 8.00	\$ -	\$ -
	EPDM ROOFING - 100%	-	SF	\$ 4.00	\$ -	\$ -
	RIGID ROOF DECK INSULATION	-	SF	\$ 1.50	\$ -	\$ -
	ROOF SHEATHING	-	SF	\$ 1.50	\$ -	\$ -
	FASCIA & CAP FLASHING	-	SF	\$ 15.00	\$ -	\$ -
	ALUM. GUTTER & DOWNSPOUT	-	LF	\$ 10.00	\$ -	\$ -
	WOOD BLOCKING	-	MBF	\$ 1,200.00	\$ -	\$ -
	MISC. ROOF ACCESSORIES	-	LS	\$ 5,000.00	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
E	EXTERIOR WALL:				\$ -	\$ 51,418
	MISCELLANEOUS EXTERIOR WALL PATCH	41,135	SF	\$ 0.75	\$ 30,851	\$ 30,851
	CLEAN & SEAL EXTERIOR WALL	41,135	SF	\$ 0.50	\$ 20,567	\$ 20,567
	CMU BACK-UP - 100%	-	SF	\$ 7.00	\$ -	\$ -
	FURR & DRYWALL	-	SF	\$ 2.50	\$ -	\$ -
	METAL STUD & SHEATHING BACK-UP - 0%	-	SF	\$ 4.50	\$ -	\$ -
	BRICK	-	SF	\$ 9.00	\$ -	\$ -
	PRECAST BAND	-	LF	\$ 30.00	\$ -	\$ -
	PRECAST BASE & ACCENT	-	SF	\$ 25.00	\$ -	\$ -
	GROUT BLOCK	-	LF	\$ 2.00	\$ -	\$ -
	GROUT LINTEL	-	LF	\$ 2.00	\$ -	\$ -
	WINDOW SILL	-	LF	\$ 20.00	\$ -	\$ -
	METAL SIDING / PANEL	-	SF	\$ 5.00	\$ -	\$ -
	RIGID INSULATION	-	SF	\$ 1.20	\$ -	\$ -
	BATT INSULATION	-	SF	\$ 0.60	\$ -	\$ -
	FLASHING	-	SF	\$ 2.00	\$ -	\$ -
	DAMPROOFING / FELT	-	SF	\$ 0.30	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
F	EXTERIOR DOORS & OPENING:				\$ -	\$ 151,021
	REPLACE H.M. DOOR, FRAME & HARDWARE	16	EA	\$ 1,500.00	\$ 24,000	\$ 24,000
	ALUM. / ENTRANCE DOOR, FRAME & HARDWARE	-	EA	\$ 3,000.00	\$ -	\$ -

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

RENOVATION - MAINTENANCE BLDG.

TIME: 2:52 PM

COST MODEL - EXISTING ONE STORY HIGH BAY STEEL FRAMED BUILDING

GSF= 52325

CODE	RENOVATION - MAINTENANCE BLDG. DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
	ADD O.H. COILING DOOR, FRAME & HARDWARE	10	EA	\$ 9,000.00	\$ 90,000	\$ 90,000
	REPLACE ALUM. WINDOW	823	SF	\$ 45.00	\$ 37,021	\$ 37,021
					\$ -	\$ -
					\$ -	\$ -
G	INTERIOR DOORS & OPENINGS:				\$ -	\$ 74,043
	REPLACE H.M. DOOR, FRAME & HARDWARE	55	EA	\$ 1,100.00	\$ 60,962	\$ 60,962
	WOOD DOOR, HM FRAME & HARDWARE	-	EA	\$ 1,200.00	\$ -	\$ -
	ALUM. WINDOW	523	SF	\$ 25.00	\$ 13,081	\$ 13,081
					\$ -	\$ -
H	INTERIOR PARTITIONS:				\$ -	\$ 130,017
	CMU PARTITION - 26% OF TOTAL	14,442	SF	\$ 7.00	\$ 101,092	\$ 101,092
	DRYWALL PARTITION - 5% OF TOTAL	3,140	SF	\$ 4.00	\$ 12,558	\$ 12,558
	FURR CMU WALL & DRYWALL - 10%	2,888	SF	\$ 2.50	\$ 7,221	\$ 7,221
	GROUT BLOCK	3,610	SF	\$ 2.00	\$ 7,221	\$ 7,221
	GROUT BOND BEAM	963	LF	\$ 2.00	\$ 1,926	\$ 1,926
	FOLDING PARTITION	-	SF	\$ 40.00	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
I	WALL FINISHES:				\$ -	\$ 67,459
	PAINT WALL - REGULAR - 10%	6,867	SF	\$ 0.65	\$ 4,463	\$ 4,463
	PAINT WALL - EPOXY - 90%	61,800	SF	\$ 0.95	\$ 58,710	\$ 58,710
	VINYL WALL COVERING - 0%	-	SF	\$ 2.00	\$ -	\$ -
	ACOUSTICAL / WOOD PANEL - 0%	-	SF	\$ 15.00	\$ -	\$ -
	CERAMIC TILE - 0%	-	SF	\$ 7.00	\$ -	\$ -
	PAINT DOOR & FRAMES	71	EA	\$ 60.00	\$ 4,285	\$ 4,285
					\$ -	\$ -
					\$ -	\$ -
J	FLOOR & BASE FINISHES:				\$ -	\$ 28,779
	CARPET - 0%	-	SY	\$ 30.00	\$ -	\$ -
	VCT - 20%	-	SF	\$ 1.50	\$ -	\$ -
	RUBBER BASE	-	LF	\$ 1.20	\$ -	\$ -
	CERAMIC FLOOR TILE - 5%	-	SF	\$ 8.00	\$ -	\$ -
	QUARRY FLOOR TILE - 5%	-	SF	\$ 10.00	\$ -	\$ -
	RUBBER FLOORING @ STAIR LANDING	-	SF	\$ 5.00	\$ -	\$ -
	STAIR TREAD & RISER	-	LF	\$ 15.00	\$ -	\$ -
	SEAL CONCRETE FLOOR - 100%	52,325	SF	\$ 0.55	\$ 28,779	\$ 28,779
					\$ -	\$ -
					\$ -	\$ -
K	CEILINGS & SOFFITS:				\$ -	\$ 82,674
	ACOUSTICAL CEILING - 10%	5,233	SF	\$ 2.50	\$ 13,081	\$ 13,081
	DRYWALL CEILING - 10%	5,233	SF	\$ 6.00	\$ 31,395	\$ 31,395
	DRYWALL BULKHEAD	1,308	SF	\$ 10.00	\$ 13,081	\$ 13,081
	EXTERIOR METAL SOFFIT	-	SF	\$ 3.50	\$ -	\$ -
	PAINT EXPOSED CEILING - 80%	41,860	SF	\$ 0.60	\$ 25,116	\$ 25,116
					\$ -	\$ -
					\$ -	\$ -
L	INTERIOR STAIRS & RAILINGS:				\$ -	\$ -
	STEEL PIPE RAILING	-	LF	\$ 40.00	\$ -	\$ -
	STEEL STAIRS	-	LF	\$ 50.00	\$ -	\$ -
	STAIR LANDING	-	SF	\$ 25.00	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
M	ACCESSORIES & SPECIALTIES:				\$ -	\$ 10,373
	PROJECTION SCREEN	-	EA	\$ 1,500.00	\$ -	\$ -
	FIRE EXTINGUISHER & CABINET	26	EA	\$ 260.00	\$ 6,802	\$ 6,802
	DIRECTORY & PLAQUE	-	LS	\$ 5,000.00	\$ -	\$ -
	TOILET PARTITION	-	EA	\$ 1,200.00	\$ -	\$ -
	TOILET ACCESSORIES	-	SET	\$ 500.00	\$ -	\$ -
	ROOM SIGNS	71	EA	\$ 50.00	\$ 3,571	\$ 3,571
	SPECIAL SIGNAGE	-	SF	\$ 0.75	\$ -	\$ -
					\$ -	\$ -
N	FIXED EQUIPMENT:				\$ -	\$ 538,081
	MISC EQUIPMENT ALLOWANCE	52,325	SF	\$ 0.25	\$ 13,081	\$ 13,081

Project: 04107-00

DATE: 16-May-05

CITY OF CHARLESTON, SC

ANALYST: Carr/ Kersey

MILFORD STREET OPERATIONS CENTER

PHASE: CM

RENOVATION - MAINTENANCE BLDG.

TIME: 2:52 PM

COST MODEL - EXISTING ONE STORY HIGH BAY STEEL FRAMED BUILDING

GSF= 52325

CODE	RENOVATION - MAINTENANCE BLDG DESCRIPTION	QTY	UNIT	COST MODEL ESTIMATE		TOTAL COST
				UNIT COST	COST	
	MISC EQUIPMENT ALLOWANCE-DOCK LEVELERS	-	EA	\$9,000.00	\$ -	\$ -
	MISC EQUIPMENT ALLOWANCE- 9,000# HYDRAULIC LIFT	15	EA	\$15,000.00	\$ 225,000	\$ 225,000
	MISC EQUIPMENT ALLOWANCE-30,000# HYDRAULIC LIFT	5	EA	\$60,000.00	\$ 300,000	\$ 300,000
					\$ -	\$ -
					\$ -	\$ -
O	CASEWORK & MILLWORK:				\$ -	\$ 52,325
	MISC. GENERAL CASEWORK ALLOWANCE	52,325	SF	\$ 1.00	\$ 52,325	\$ 52,325
					\$ -	\$ -
					\$ -	\$ -
P	LOOSE EQUIPMENT & FURNISHINGS:				\$ -	\$ 15,549
	BLIND	823	SF	\$3.00	\$ 2,468	\$ 2,468
	MISC. GENERAL FURNISHING ALLOWANCE	52,325	SF	\$ 0.25	\$ 13,081	\$ 13,081
					\$ -	\$ -
					\$ -	\$ -
Q	MECHANICAL CONVEYANCES:				\$ -	\$ -
	ELEVATOR	-	EA	\$ 16,000.00	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
T	PLUMBING:				\$ -	\$ 261,625
	PLUMBING	52,325	SF	\$5.00	\$ 261,625	\$ 261,625
					\$ -	\$ -
					\$ -	\$ -
U	FIRE PROTECTION:				\$ -	\$ 117,731
	SPRINKLER SYSTEM	52,325	SF	\$2.25	\$ 117,731	\$ 117,731
					\$ -	\$ -
					\$ -	\$ -
V	H.V.A.C. SYSTEM:				\$ -	\$ 673,250
	HVAC SYSTEM	52,325	SF	\$10.00	\$ 523,250	\$ 523,250
	HVAC SYSTEM-FUME EVACUATION SYSTEM	5	EA	\$30,000.00	\$ 150,000	\$ 150,000
					\$ -	\$ -
					\$ -	\$ -
W	ELECTRICAL SYSTEM:				\$ -	\$ 170,056
	ELECTRICAL SYSTEM	52,325	SF	\$3.25	\$ 170,056	\$ 170,056
					\$ -	\$ -
					\$ -	\$ -
X	LIGHTING:				\$ -	\$ 130,813
	ELECTRICAL FIXTURES	52,325	SF	\$2.50	\$ 130,813	\$ 130,813
					\$ -	\$ -
					\$ -	\$ -
Y	SPECIAL SYSTEM & COMMUNICATION:				\$ -	\$ 143,894
	SPECIAL SYSTEM - INFRASTRUCTURE	52,325	SF	\$0.75	\$ 39,244	\$ 39,244
	SPECIAL SYSTEM - EMERGENCY GENERATOR	52,325	SF	\$2.00	\$ 104,650	\$ 104,650
					\$ -	\$ -
					\$ -	\$ -
SUB TOTAL BUILDING					\$ 3,360,933	\$ 3,360,933
A	SITE GENERAL CONDITIONS & FEES:				\$ -	\$ -
	SITE GENERAL CONDITIONS & FEES	52,325	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
Z1	SPECIAL SITE CONDITIONS/DEMOLITION:				\$ -	\$ -
	SPECIAL SITE PREPARATION / FOUNDATION ALLOWANCE	52,325	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
Z2	SITE DEVELOPMENT:				\$ -	\$ -
	SITE DEVELOPMENT	52,325.0	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
AA	SITE UTILITIES:				\$ -	\$ -
	SITE UTILITIES	52,325	SF	\$ -	\$ -	\$ -
					\$ -	\$ -
					\$ -	\$ -
SUB TOTAL SITE					\$ -	\$ -
TOTAL BUILDING & SITE					\$ 3,360,933	\$ 3,360,933

Project: 04107-00

CITY OF CHARLESTON, SC

MILFORD STREET OPERATIONS CENTER

RENOVATION - WAREHOUSE

COST MODEL - EXISTING ONE STORY HIGH BAY STEEL FRAMED BUILDING

DATE:

16-May-05

ANALYST:

Carr/ Kersey

PHASE:

CM

TIME:

2:53 PM

CODE	RENOVATION - WAREHOUSE DESCRIPTION	COST MODEL		
		GSF	36,750	
		COST	\$/GSF	%
	BUILDING CONSTRUCTION:			
A	GENERAL CONDITIONS	\$ 257,250	\$ 7.00	15%
B	BUILDING FOOTING & SLAB	\$ 55,125	\$ 1.50	3%
C	STRUCTURAL SYSTEM	\$ 38,588	\$ 1.05	2%
D	ROOFING	\$ 19,294	\$ 0.53	1%
E	EXTERIOR WALL	\$ 32,753	\$ 0.89	2%
F	EXTERIOR DOORS & OPENING	\$ 165,455	\$ 4.50	10%
G	INTERIOR DOORS & OPENING	\$ 21,948	\$ 0.60	1%
H	INTERIOR PARTITIONS	\$ 94,256	\$ 2.56	5%
I	WALL FINISHES	\$ 47,851	\$ 1.30	3%
J	FLOOR FINISHES	\$ 20,213	\$ 0.55	1%
K	CEILINGS & SOFFITS	\$ 51,083	\$ 1.39	3%
L	INTERIOR STAIRS & RAILING	\$ -	\$ -	0%
M	ACCESSORIES & SPECIALTIES	\$ 5,908	\$ 0.16	0%
N	FIXED EQUIPMENT	\$ 55,125	\$ 1.50	3%
O	CASEWORK & MILLWORK	\$ 9,188	\$ 0.25	1%
P	LOOSE EQUIPMENT & FURNISHINGS	\$ 13,118	\$ 0.36	1%
Q	MECHANICAL CONVEYANCES	\$ -	\$ -	0%
R	WATER SUPPLY & TREATMENT	\$ -	\$ -	0%
S	WASTE WATER DISPOSAL	\$ -	\$ -	0%
T	PLUMBING	\$ 36,750	\$ 1.00	2%
U	FIRE PROTECTION	\$ 55,125	\$ 1.50	3%
V	H.V.A.C. SYSTEM	\$ 367,500	\$ 10.00	21%
W	ELECTRICAL SYSTEM	\$ 183,750	\$ 5.00	11%
X	LIGHTING	\$ 73,500	\$ 2.00	4%
Y	SPECIAL SYSTEM COMMUNICATION	\$ 110,250	\$ 3.00	6%
	SUB-TOTAL BUILDING	\$ 1,714,026	\$ 46.64	100%
10%	DESIGN CONTINGENCY - BUILDING	\$ 171,403	\$ 4.66	
0%	ESCALATION - BUILDING	\$ -	\$ -	
	TOTAL CONSTRUCTION CONTRACT AWARD PRICE	\$ 1,885,429	\$ 51.30	